Final Project Closeout Report
For
Building 440

Revision: 0

July 2005

Remediation, Industrial D&D, and Site Services
Kaiser Hill Company, LLC

Review for Classification
Name: N/A
Date:

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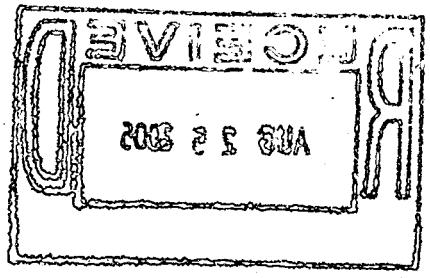

I. Introduction

Building 440 Description

Demolition of Building 440 (B440) was divided into two distinct Closure Projects; Eastside Closure Project, and Westside Closure Project. Rooms 140, 140A and 140B were covered in the Eastside Closure Project RLCR/PDSR, the remaining structure was covered in the Westside Closure Project RLCR/PDSR.

B440 was an approximately 59,000 square foot structure built in 1971. The Structure was a pre-fabricated building built on a concrete foundation. The exterior walls were constructed of insulated metal panels attached to a steel frame. The roof was constructed of metal decking with a built-up roof.

B440 was originally constructed as a production control, shipping of products for final assembly, and shipping wastes for disposal. Special nuclear materials and depleted uranium were staged and shipped out of this building by truck and railcar. In the early 1970's, B440 was also used to modify and repair rail cars, semi-truck trailers and escort vehicles to meet specific DOE standards for transport of special nuclear material and radioactive waste. Vehicle modification work in B440 continued until 1994. Most of the original equipment associated with this activity was shipped to other DOE facilities. Production processes in B440 included various welding, painting, machining, pipe fitting, metal working, and electrical work used to modify transports. Paint booths were used to coat fabricated, non-nuclear components and transports. The gantry and 5-ton cranes were used to move materials associated with the transport modification effort.

B440 was expanded four times to include a railcar bay, a high bay, paint booths, and locker rooms in support of transport modification efforts and a 20,000 square foot storage area. Room 114 was a railcar bay. The railroad tracks, which were covered with poured concrete in the early 1990's is approximately five feet lower than the main building floor. Gantry cranes in rooms 105 and 114 were used to move equipment and materials used in the modification of safe secure transports.

B440's final use was as a permitted storage area for LLW, TRU, and mixed wastes, as well as for WIPP characterization, waste repackaging, and shipment. Two Permacons, a glovebox, and HEPA filtration was added to B440 in the late 1999's to support characterization and repackaging of non-conforming wastes.

The following utilities were associated with B440: electrical, plant water, plant sanitary, plant stream, and an overhead fire sprinkler system.

Based on the analysis of radiological, chemical and physical hazards contained in the RLCRs/PDSRs, Building 440 was classified as a RFCA Type 2 facility pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999). Classification is also based on the relative complexity associated with decommissioning the facilities.

Closure of the facility was completed in accordance with the Rocky Flats Cleanup Agreement Standard Operating Protocol (RFCA RSOP) for Facility Disposition. Integrated Work Control Program (IWCP) procedures were followed during building decommissioning.

II. Action Description

UTILITY DISCONNECT

Gash Electric performed the electrical isolation of all original feeds to systems and equipment associated with B440. Isolation of electrical power was performed by taking down specific grids by Lock-Out/Tag-Out, then isolating the main power to the facility by cutting, removing or air-gapping electrical systems in the facility. This "cold and dark" process greatly reduces the potential for electric shock injuries to worker during interior dismantling and asbestos abatement activities. Use of light stands and external generators provided interior lighting for these activities.

Potable water feed to the facility was discontinued, and isolated greater than five feet deep. All sanitary fixtures were disconnected, and sewer lines were flushed with a volume of high-pressure water equal to approximately 10 times the volume of the pipe. Sewer lines were then isolated at two manholes exterior to the facility at a minimum depth of four feet.

Steam and condensate lines and natural gas lines were isolated exterior to the facility in 2003. See article 1 of Appendix 1 for utility disconnects.

CONTAMINANTS OF CONCERN

Contaminants included asbestos, RCRA and TSCA constituents, beryllium and radiological contamination. Characterization was conducted in accordance with the RLCP and PDSP.

RCRA/TSCA

Building 440 RCRA Unit was closed under Closure Description Document for Unit 440.1, 05-RF-00149, dated February 9, 2005; approval of the CDD was dated March 29, 2005. The Closure Summary Report for Unit 440.1, 05-RF-00513, dated May 24, 2005 was sent to CDPHE. For disposition of waste streams see Section VII.

TSCA constituents would have consisted solely of PCB paint or ballasts, which would have remained with the building structure during demolition. No TSCA waste was removed from the structure during D&D operations.

Beryllium

There was adequate historical and process knowledge to conclude that beryllium was not used or stored in this building, therefore, no beryllium sampling was performed.

Asbestos Abatement

Asbestos inspectors conducted the asbestos inspections and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1.* Building materials suspected of containing asbestos were identified for sampling at the discretion of the inspectors.

RISS Safety performed a comprehensive, invasive asbestos inspection in Building 440 on May 27, 2004. RISS Safety identified the following friable and non-friable asbestos containing building materials: vinyl floor tiles and thermal systems insulation on pipe elbows and fittings.

Onyx Environmental performed asbestos abatement activities. Abatement activities commenced 5/2/2005, and were completed 5/23/2005, and included the removal of asbestos containing "Thermal System Insulation" (TSI). ACM floor tiles were left in place and removed with the building slab.

During asbestos removal operations, the building was posted as an asbestos control area. HEPA-filtered ventilation was set up to provide air movement within the building. Negative pressure was not implemented due to size of the open area in the facility. Only qualified workers with current asbestos training, physicals, and respirator training/fit testing were utilized to perform abatement activities.

During abatement activities, Personal Protective Equipment (PPE) consisted of disposable coveralls, disposable booties, hoods, gloves and negative pressure, HEPA filtered respirators. A decontamination enclosure system consisting of equipment room and a clean room were established to support workers engaged in the operation. Shower facilities were also available. PPE was donned prior to entering the work area. Upon completion of work, all PPE, except respirators, was bagged as asbestos waste for disposal.

Total quantities of asbestos containing material (ACM) waste removed from the facility are outlined in Section VII, Waste Stream Disposition.

ROOM 113 PAINT BOOTH

The paint booth located in Room 113 was originally thought to be contaminated with lead, chromium and possibly PCBs, from overspray during transport modification operations. Walkdown associated with the PDSR showed that the booth was clean stainless steel, with no chemical or radiological contamination on the booth or the surrounding floor. The booth was removed with the building structure, and the slab beneath room 113 remains in place.

ROOM 123A

The Permacon, C-Cell and glovebox in room 123A were removed, consistent with the RSOP for Facility Component Removal, Size Reduction and Demolition Activities, during building strip-out, and disposed of as low-level waste. The plenum for room 123A remained in the structure until commencement of demolition activities. At that time, the roof and exterior wall of room122 were breached, and the plenum removed intact, and disposed of as low-level waste. A portion of the floor beneath the glovebox was radiologically contaminated, and disposed of as low-level waste.

ROOM 114/RAILS

Room 114 was used at one time for the loading of rail cars, and was equipped with a rail spur. The rails in the room were covered with concrete to the level of the final flooring. An investigation of the facility in conjunction with the PDSR located the rails. The rails were removed, and the area surveyed for radiological contamination. No contamination was detected.

III. Verification Action Goals Were Met

Four action objectives were established for Building 440 removal project prior to beginning demolition:

Decontamination of the facility (as necessary) to support release for decommissioning per site approved procedures.

The facilities primary structures were decontaminated to free-release standards and disposed of in an off-Site landfill. With the exception of an area of concrete beneath the glovebox in room 123, the slab was also removed and disposed of as sanitary waste. A portion of the slab beneath room 113 remains in place, and will be greater than 3' below final grade (see Appendix 1, Article 2). Holes were drilled in the remaining slab on 10' centers to allow for groundwater flow.

Decommissioning of the Building 440 facility in accordance with RFCA and applicable or relevant and appropriate requirements.

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RFCA and other relevant requirements were complied with throughout the project. Consultations with the LRA were conducted throughout the project.

Complete decontamination and decommissioning activities in a manner that is protective of Site workers, the public and the environment.

Decontamination and decommissioning activities were completed within regulatory requirements. Air sampling asbestos was conducted during demolition activities. Dust control measures were implemented during demolition, using wet methods via fire hydrants and fire hoses. No injuries or releases to the environment occurred during the project.

Demolish the Building 440 facility structures, utilities, and process waste lines to 3' below final grade.

The facility superstructure and slab were removed during demolition, except as previously noted. Approximately 150,000 cubic yards of overburden were brought in to return the 440/460 area to final grade plan. Remaining slab will be greater than 3' below grade when final grade is achieved.

IV. Verification of Treatment Process

This section is not applicable.

V. Radiological Analysis

Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describes the minimum survey requirements (refer to the RISS Characterization Project files for the Building 440 Radiological Characterization Plan).

Westside

Two Class1 and three Class 2 radiological survey unit packages were developed for the B440 Westside. Survey units 440504 and 440505 were designated as Class 1 because these areas were expected to contain, or had contained, residual radioactivity greater than the transuranic DCGLw. Historical Site Assessment and process knowledge of this area provides a high degree of confidence that one or more individual measurements may exceed the DCGLw. Survey units 440502, 440503, and 440506 were designated as Class 2 since these areas were not expected to contain any residual radioactivity greater than the transuranic DCGLw, even though the HSA and process knowledge showed that these areas of the building shipped and stored TRU and LLW materials during past operations.

Building 440 Westside survey unit packages were developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Media samples were collected in accordance with RSP 16.03 *Radiological Samples of Building Media*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*.

A total of 220 TSA measurements, 203 RSA measurements, 38 surface media (paint) samples, and 38 pre and post TSA and RSA measurements were collected from B440 Westside. Wall and ceiling surfaces were factory-original paint, and were therefore not media sampled. The 38 floor samples were adequate to properly characterize the B440 Westside. A minimum alpha scan survey of 50% of all floor surfaces at

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Building No / Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-09172004-61-015	WIPE	BART	111 IN FRONT OF RESPIRATOR CABINET	BERYLLIUM AND B < 0.1000 _ UG/100CM	

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DOES NOT CONTAIN
OFFICIAL USE ONLY INFORMATION
Name/Org Shyra Nagle/PRC Date 11/5/08

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Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-09172004-61-003	WIPE	BART	114 15' NORTH OF COLUMN 14B	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-004	WIPE	BART	108 PHONE ON DESK CLOSEST TO WEST WALL	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-005	WIPE	BART	107 APPROX. 4' EAST OF OVERMASS AREA	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-006	WIPE	BART	106 APPROX. 4' WEST OF HOIST; DRUM STORAGE S	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-007	WIPE	BART	112 APPROX. 12' EAST OF WEST WALL IN ROW 005	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-008	WIPE	BART	113 IN FRONT OF PERSONNEL DOOR TO PERMACON	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-009	WIPE	BART	113 INSIDE PERMACON, APPROX. 3' NORTH OF GAS	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-010	WIPE	BART	120 EAST END OF ROW HS2	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-011	WIPE	BART	122 IN FRONT OF AIRLOCK DOORS (CONT.)	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-012	WIPE	BART	N/A ORANGE DRUM GRABBER	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-013	WIPE	BART	N/A FLOORBOARD OF CROWN FORKLIFT (CONT.)	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-014	WIPE	BART	N/A TINES OF CROWN FORKLIFT (CONT.)	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-015	WIPE	BART			

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Building No

Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-06032004-604-010	WIPE	RFCS	123B ON VENTILATED SORTING TABLE LEFT FRONT E	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06032004-604-011	WIPE	RFCS	123B ON VENTILATED SORTING TABLE RIGHT FRONT	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06032004-604-012	WIPE	RFCS	123B FRONT CENTER OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06032004-604-013	WIPE	RFCS	123B LEFT CENTER OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06032004-604-014	WIPE	RFCS	123B BOTTOM SHELF IN BACK CORNER TOOL REST	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06032004-604-015	WIPE	RFCS	123B COMPOSITE OF TOOLS	BERYLLIUM AND B	< 0.0250 _ UG/100CM
440-06032004-604-016	WIPE	RFCS	123B NON-SPARKING TOOLS	BERYLLIUM AND B	< 0.0500 _ UG/100CM
440-06252004-604-100	WIPE	RFCS	118 QUARTERLY SURVEY WOMEN'S LOCKER ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-101	WIPE	RFCS	118 QUARTERLY SURVEY WOMEN'S LOCKER ROOM SIN	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-102	WIPE	RFCS	122 QUARTERLY SURVEY CENTER OF FLOOR	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-103	WIPE	RFCS	122 QUARTERLY SURVEY TABLE	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-104	WIPE	RFCS	122 QUARTERLY SURVEY CENTER OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-105	WIPE	RFCS			

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Building No / Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-06252004-604-105	WIPE	RFCS	120 QUARTERLY SURVEY DRUM CART YELLOW TIRES	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-106	WIPE	RFCS	112 QUARTERLY SURVEY CENTER OF FLOOR	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-107	WIPE	RFCS	106 QUARTERLY SURVEY BY TABLE	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-108	WIPE	RFCS	113 QUARTERLY SURVEY LUDLUM 2929	BERYLLIUM AND B	< 0.0333 _ UG/100CM
440-06252004-604-109	WIPE	RFCS	105 QUARTERLY SURVEY FORK TRUCK PEDALS	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-110	WIPE	RFCS	105 QUARTERLY SURVEY CENTER OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06252004-604-111	WIPE	RFCS	141 QUARTERLY SURVEY CENTER OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06292004-604-012	WIPE	RFCS	123B C-CELL MIDDLE OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06292004-604-013	WIPE	RFCS	123B TOOLS	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-06292004-604-014	WIPE	RFCS	123B GLOVES USED IN AREA	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-001	WIPE	BART	141 WEST OF 3RD COLUMN FROM WEST WALL	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-002	WIPE	BART	105 DRUM SCALE	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-09172004-61-003	WIPE	BART			

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Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-06022004-604-001	WIPE	RFCS	123A WHERE TOOLS HAD BEEN LEFT OUTSIDE DOOR T	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-06022004-604-002	WIPE	RFCS	123A AT STEP-OFF AREA OUTSIDE THE BE CONTROLL	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-06022004-604-003	WIPE	RFCS	123A TEST DRUM THAT CAME OUT OF BE CONTROLLED	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-06032004-604-010	WIPE	RFCS			

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Building No

Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-03242004-604-004	WIPE	RFCS	123B RED CART TOP SHELF	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-005	WIPE	RFCS	123B BATTERY OPERATED DRILL ON CART	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-006	WIPE	RFCS	123B TOOLS ON CART TOP SHELF	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-007	WIPE	RFCS	123B TOOLS ON CART MIDDLE SHELF	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-008	WIPE	RFCS	123B FRONT EDGE OF SALAD BAR	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-009	WIPE	RFCS	123B INSIDE SALAD BAR RIGHT SIDE	BERYLLIUM AND B	< 0.1000 _ UG/100CM

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Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-02102004-604-206	WIPE	RFCS	105 QUARTERLY SAMPLING. DOOR #23D IN FRONT O	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-207	WIPE	RFCS	141 QUARTERLY SAMPLING. ENTRANCE CENTER	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-208	WIPE	RFCS	114 QUARTERLY SAMPLING. CENTER OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-209	WIPE	RFCS	111 QUARTERLY SAMPLING. IN FRONT OF EAST DO	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-210	WIPE	RFCS	102 QUARTERLY SAMPLING. FLOOR AT MAIN ENTRA	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-211	WIPE	RFCS	123B QUARTERLY SAMPLING. EXAUST FILTER INSID	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-212	WIPE	RFCS	123B QUARTERLY SAMPLING. ON FILTER LEFT OF H	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-213	WIPE	RFCS	123B QUARTERLY SAMPLING. INSIDE C-CELL	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-02102004-604-214	WIPE	RFCS	123B QUARTERLY SAMPLING. FILTER ON ENTRANCE D	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-001	WIPE	RFCS	123B MIDDLE OF ROOM	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-002	WIPE	RFCS	123B UNDER DRUM POSITIONING AREA AT SALAD BAR	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-003	WIPE	RFCS	123B LEFT SIDE OF SALAD BAR	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-03242004-604-004	WIPE	RFCS			

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Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-01182005-604-064	WIPE	RFCS	123A RCT DESK INSIDE RAD COUNTER	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-01182005-604-065	WIPE	RFCS	113 IONEX UNIT FRAME UNDER NORTH DUCT	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-01182005-604-066	WIPE	RFCS	113 UNDER IONEX UNIT	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-01182005-604-067	WIPE	RFCS	113 RCT DESK N FRONT OF LUDLUM 2929S	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-01182005-604-068	WIPE	RFCS	112 CENTER OF ROOM N OF INTERSECTION TO ROOM	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-01182005-604-069	WIPE	RFCS	105 AT DOORWAY BETWEEN 106 AND 105	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-01182005-604-070	WIPE	RFCS	105 CENTER OF ROOM AT DRIVEWAY TO ROOM 112	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-02102004-604-201	WIPE	RFCS	112 QUARTERLY SAMPLING. YELLOW BURM GARAGE	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-02102004-604-202	WIPE	RFCS	112 QUARTERLY SAMPLING. DOOR #18 LATCH	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-02102004-604-203	WIPE	RFCS	113 QUARTERLY SAMPLING. BY DOOR #16T YELLOW	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-02102004-604-204	WIPE	RFCS	113 QUARTERLY SAMPLING. LUDLUM 2929 H06945 I	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-02102004-604-205	WIPE	RFCS	120 QUARTERLY SAMPLING. AT DOOR ENTRY	BERYLLIUM AND B < 0.1000 _ UG/100CM	
440-02102004-604-206	WIPE	RFCS			

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Sample Number	Sample Work Pkg	Comp	Room Location	Analyte Name	Concentration
440					
440-01182005-604-051	WIPE	RFCS	123A NORTH OF CA ROPE	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-052	WIPE	RFCS	123A SOUTH OF CA ROPE	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-053	WIPE	RFCS	123A WEST OF C-CELL DOORS CENTER	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-054	WIPE	RFCS	123A ENGINE HOIST (BLACK) HOOK BLUEBIRD MODEL	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-055	WIPE	RFCS	123A TOP OF ALPHA AIR MONITOR, NEXT TO SOUTH	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-056	WIPE	RFCS	123A FIRST STEP OF STAIRS TO GLOVEBOX ON SOUT	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-057	WIPE	RFCS	123A BLACK SWIVEL STOOL SEAT	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-058	WIPE	RFCS	123A BASE OF RED HYDRAULIC JACK ON ENGINE HOI	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-059	WIPE	RFCS	123A DOOR KNOB TO PERMACON	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-061	WIPE	RFCS	123A FLOOR N OF GLOVEBOX IN SUPPORT ARE NEAR	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-062	WIPE	RFCS	123A MAT ON FLOOR N OF C-CELL WEST WINDOW	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-063	WIPE	RFCS	123A AIR LOCK BY DOORS 34A AND 34B	BERYLLIUM AND B	< 0.1000 _ UG/100CM
440-01182005-604-064	WIPE	RFCS			

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Beryllium Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Result ($\mu g/100\ cm^2$)
Building 440Westside - RIN 05C0243 & 05Z1199				
440-05022005-00-071	71	107	Floor	< 0.1
440-05022005-00-072	72	112	Floor	< 0.1
440-05022005-00-075	75	106	Floor	< 0.1
440-05022005-00-076	76	112	Floor	< 0.1
440-05022005-00-077	77	112	Floor	< 0.1
440-05022005-00-078	78	112	Floor	< 0.1
440-05022005-00-079	79	112	Floor	< 0.1
440-05022005-00-080	80	106	Floor	< 0.1
440-05022005-00-081	81	106	Floor	< 0.1
440-05022005-00-082	82	107	Floor	< 0.1
440-05022005-00-083	83	107	Floor	< 0.1
440-05022005-00-084	84	105	Floor	< 0.1
440-05022005-00-085	85	114	Dock Wall	< 0.1
440-05032005-313-001	88	123A C-Cell	Top of work bench/enclosure	< 0.1
440-05032005-313-002	89	123A C-Cell	Inside work bench /enclosure	< 0.1
440-05032005-313-003	90	123A C-Cell	Inside work bench/enclosure	< 0.1
440-05032005-313-004	91	123A C-Cell	Top of work bench/enclosure	< 0.1
440-05032005-313-005	92	123A C-Cell	Back of work bench/enclosure	< 0.1
440-05032005-313-006	93	123A C-Cell	Underside of work bench/enclosure	< 0.1
440-05032005-313-007	94	123A C-Cell	Floor	< 0.1
440-05032005-313-008	95	123A C-Cell	Floor	< 0.1
440-05032005-313-009	96	123A C-Cell	North Wall	< 0.1
440-05032005-313-010	97	123A C-Cell	West Wall	< 0.1
440-05032005-313-011	98	123A C-Cell	South Wall	< 0.1
440-05032005-313-012	99	123A C-Cell	East Wall	< 0.1

Rev. 1.

Rev. 1.

Notes:

1. Eight-seven (87) beryllium samples were collected throughout Building 440. The above sample numbers are for the Westside only. The Eastside RLCR/PDSR contained the missing numbers in the numbering sequence.
2. **An additional 89 in-process beryllium swipe results of Building 440 interior surfaces are included in the following pages behind the above table. Map locations are not available for these 89 in-process beryllium swipe results. These samples were collected throughout the building and support the PDS swipe results in concluding that no beryllium exists above the unrestricted release criteria in any area of the facility.**

Rev. 1.

Beryllium Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Result ($ug/100\ cm^2$)
Building 440Westside - RIN 05C0243				
440-05022005-00-001	1	119	Floor	< 0.1
440-05022005-00-002	2	105	Floor	< 0.1
440-05022005-00-003	3	108	Floor	< 0.1
440-05022005-00-004	4	112	Floor	< 0.1
440-05022005-00-005	5	114	Floor	< 0.1
440-05022005-00-006	6	111	Wall	< 0.1
440-05022005-00-009	9	112	Floor	< 0.1
440-05022005-00-011	11	114	Floor	< 0.1
440-05022005-00-012	12	121	Floor	< 0.1
440-05022005-00-013	13	112	Floor	< 0.1
440-05022005-00-014	14	102A	Floor	< 0.1
440-05022005-00-015	15	106	Floor	< 0.1
440-05022005-00-016	16	105	Floor	< 0.1
440-05022005-00-017	17	112	Floor	< 0.1
440-05022005-00-018	18	106	Floor	< 0.1
440-05022005-00-020	20	105	Floor	< 0.1
440-05022005-00-022	22	105	Floor	< 0.1
440-05022005-00-023	23	114	Floor	< 0.1
440-05022005-00-024	24	112	Floor	< 0.1
440-05022005-00-025	25	105	Floor	< 0.1
440-05022005-00-026	26	105	Floor	< 0.1
440-05022005-00-027	27	112	Floor	< 0.1
440-05022005-00-028	28	114	North Wall	< 0.1
440-05022005-00-030	30	114	Floor	< 0.1
440-05022005-00-031	31	105	Floor	< 0.1
440-05022005-00-032	32	123A	Floor	< 0.1
440-05022005-00-033	33	119	Floor	< 0.1
440-05022005-00-034	34	122	Floor	< 0.1
440-05022005-00-036	36	113	Floor	< 0.1
440-05022005-00-037	37	123	Floor	< 0.1
440-05022005-00-039	39	105	Floor	< 0.1
440-05022005-00-040	40	112	Floor	< 0.1
440-05022005-00-041	41	112	Floor	< 0.1
440-05022005-00-042	42	112	Floor	< 0.1
440-05022005-00-043	43	123A	Floor	< 0.1
440-05022005-00-044	44	115	Floor	< 0.1
440-05022005-00-045	45	120	Floor	< 0.1
440-05022005-00-046	46	123A	Floor	< 0.1
440-05022005-00-047	47	105	Floor	< 0.1
440-05022005-00-048	48	102	Floor	< 0.1
440-05022005-00-050	50	116	Wall	< 0.1
440-05022005-00-052	52	114	Floor	< 0.1
440-05022005-00-053	53	112	Floor	< 0.1
440-05022005-00-054	54	120	Floor	< 0.1
440-05022005-00-056	56	119	Floor	< 0.1
440-05022005-00-057	57	120	Floor	< 0.1
440-05022005-00-058	58	117	Floor	< 0.1
440-05022005-00-059	59	123	Floor	< 0.1
440-05022005-00-060	60	105	Floor	< 0.1
440-05022005-00-061	61	119	Floor	< 0.1
440-05022005-00-062	62	112	Floor	< 0.1
440-05022005-00-063	63	114	Floor	< 0.1
440-05022005-00-064	64	112	Floor	< 0.1
440-05022005-00-066	66	122	Floor	< 0.1
440-05022005-00-068	68	105	Floor	< 0.1
440-05022005-00-069	69	106	Floor	< 0.1
440-05022005-00-070	70	113	Floor	< 0.1

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Survey Area: 5 Survey Unit: 440506 Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces >2m

Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440506PBP-N020	4	4.2	N/A	N/A
440506PBP-N021	4	10.0	N/A	N/A
440506PBP-N022	4	1.1	N/A	N/A
440506PBP-N023	5	1.8	N/A	N/A
440506PBP-N024	5	-4.2	N/A	N/A
440506PBP-N025	4	-2.0	N/A	N/A
440506PBP-N026	5	-4.2	N/A	N/A
440506PBP-N027	5	20.3	N/A	N/A
440506PBP-N028	5	5.1	N/A	N/A
440506PBP-N029	5	7.8	N/A	N/A

Survey Area: 5	Survey Unit: 440506	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces >2m

Random/QC Total Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440506PRP-N001	5	27.6	N/A	N/A
440506PRP-N002	5	18.3	N/A	N/A
440506PRP-N003	4	-4.0	N/A	N/A
440506PRP-N004	5	21.6	N/A	N/A
440506PRP-N005	5	15.1	N/A	N/A
440506PRP-N006	4	-9.8	N/A	N/A
440506PRP-N007	5	3.1	N/A	N/A
440506PRP-N008	5	12.3	N/A	N/A
440506PRP-N009	4	16.9	N/A	N/A
440506PRP-N010	4	-4.0	N/A	N/A
440506PRP-N011	5	1.2	N/A	N/A
440506PRP-N012	5	18.3	N/A	N/A
440506PRP-N013	4	-4.0	N/A	N/A
440506PRP-N014	5	12.3	N/A	N/A
440506PRP-N015	5	40.1	N/A	N/A
440506QRP-N015	8	23.6	N/A	N/A
440506PRP-N016	4	2.2	N/A	N/A
440506PRP-N017	5	21.6	N/A	N/A
440506QRP-N017	8	8.9	N/A	N/A
440506PRP-N018	5	12.3	N/A	N/A
440506PRP-N019	5	9.1	N/A	N/A

Survey Area: 5	Survey Unit: 440506	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces >2m

Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440506PBP-N020	7	-1.8	N/A	N/A
440506PBP-N021	6	0.9	N/A	N/A
440506PBP-N022	7	-1.8	N/A	N/A
440506PBP-N023	6	0.9	N/A	N/A
440506PBP-N024	7	1.2	N/A	N/A
440506PBP-N025	6	-0.6	N/A	N/A
440506PBP-N026	7	-1.8	N/A	N/A
440506PBP-N027	6	-0.6	N/A	N/A
440506PBP-N028	7	1.2	N/A	N/A
440506PBP-N029	6	-0.6	N/A	N/A

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Survey Area: 5 Survey Unit: 440506 Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces >2m

Random Removable Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440506PRP-N001	6	2.4	N/A	N/A
440506PRP-N002	7	-1.8	N/A	N/A
440506PRP-N003	6	-0.6	N/A	N/A
440506PRP-N004	7	-1.8	N/A	N/A
440506PRP-N005	6	0.9	N/A	N/A
440506PRP-N006	7	-1.8	N/A	N/A
440506PRP-N007	6	-0.6	N/A	N/A
440506PRP-N008	7	-0.3	N/A	N/A
440506PRP-N009	6	2.4	N/A	N/A
440506PRP-N010	7	-1.8	N/A	N/A
440506PRP-N011	6	-0.6	N/A	N/A
440506PRP-N012	7	-1.8	N/A	N/A
440506PRP-N013	6	0.9	N/A	N/A
440506PRP-N014	7	-0.3	N/A	N/A
440506PRP-N015	6	-0.6	N/A	N/A
440506PRP-N016	7	-0.3	N/A	N/A
440506PRP-N017	6	-0.6	N/A	N/A
440506PRP-N018	7	-1.8	N/A	N/A
440506PRP-N019	6	0.9	N/A	N/A

Survey Area: 5	Survey Unit: 440506	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces >2m

Comments Sheet

General Comments: N/A

TSA Comments: For instruments that were used for both TSAs and scans (T/S) on the Instrument Data Sheet, The TSA A-Priori MDA is 48.0 and the scan A-Priori MDA is 300.0.

1. Locations 20-22 taken inside exhaust ventilation duct.
2. Locations 23-26 taken on outside of supply duct.
3. Locations 27-29 taken on horizontal roof surfaces of permacon.
4. A scan survey was performed on a minimum of 10% of the permacon surfaces.

RSA Comments: N/A

Media Comments: No media samples were required for this survey unit. The surfaces were unpainted or factory original paint.

Survey Area: 5	Survey Unit: 440506	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces >2m

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	515538	05/16/05	Electra	674	AP-6	08/02/05	0.182	NA	300.0	NA	S
2	511466	05/16/05	Electra	281	AP-6	09/17/05	0.180	NA	300.0	NA	S
3	515538	05/17/05	Electra	674	AP-6	08/02/05	0.182	NA	300.0	NA	S
4	511466	05/17/05	Electra	3254	DP-6	07/04/05	0.225	NA	48.0	NA	T/S
5	515538	05/17/05	Electra	3102	DP-6	06/16/05	0.216	NA	48.0	NA	T/S
6	515538	05/18/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
7	515538	05/18/05	SAC-4	1130	NA	07/03/05	0.330	NA	10.0	NA	R
8	511466	05/18/05	Electra	3254	DP-6	07/04/05	0.225	NA	48.0	NA	Q

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

Survey Area: 5	Survey Unit: 440506	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces >2m

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 10 | Nbr QC Required: 2

Nbr Random Measurements Performed: 19 | Nbr Biased Measurements Performed: 10 | Nbr QC Performed: 2

Alpha

Maximum:	40.1 dpm/100cm²
Minimum:	-9.8 dpm/100cm²
Mean:	8.6 dpm/100cm²
Standard Deviation:	11.5
QC Maximum:	23.6 dpm/100cm²
QC Minimum:	8.9 dpm/100cm²
QC Mean:	16.2 dpm/100cm²
Transuranic DCGLw:	100.0 dpm/100cm²
Transuranic DCGLemc:	300.0 dpm/100cm²

Removable Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 10

Nbr Random Measurements Performed: 19 | Nbr Biased Measurements Performed: 10

Alpha

Maximum:	2.4 dpm/100cm²
Minimum:	-1.8 dpm/100cm²
Mean:	-0.4 dpm/100cm²
Standard Deviation:	1.3
Transuranic DCGLw:	20.0 dpm/100cm²

Media Sample Results

Nbr Random Required: 0 | Nbr Biased Required: 0

Nbr Random Collected: 0 | Nbr Biased Collected: 0

Uranium

Maximum:	NA dpm/100cm²
Minimum:	NA dpm/100cm²
Mean:	NA dpm/100cm²
Standard Deviation:	NA
Uranium DCGLw:	5,000 dpm/100cm²
Uranium DCGLemc:	15,000 dpm/100cm²

Transuranic

Maximum:	NA dpm/100cm²
Minimum:	NA dpm/100cm²
Mean:	NA dpm/100cm²
Standard Deviation:	NA
Transuranic DCGLw:	100 dpm/100cm²
Transuranic DCGLemc:	300 dpm/100cm²

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

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Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Media Samples Data Sheet

Site Sample ID / Nbr Description	Nuclide	Sample (pCi/g)	Sample MDA (pCi/g)	Weight (g)	Surface Area (in^2)	Sample Nuclide ($dpm/100cm^2$)	Sample Nuclide MDA ($dpm/100cm^2$)	Sample Total ($dpm/100cm^2$)
05C0249-038.001 38	U234	0.0000	61.4000	18.60	26.3	0	1,494	
46, 47	U235	0.0000	0.2230			0	5	Uranium
	U238	0.0000	1.3900			0	34	0
	Pu239/240	0.0000	1.5523			0	38	Transuranic
	Am241	0.0000	0.2240			0	6	0
05C0249-039.001 39	U234	0.0000	57.6000	21.10	26.3	0	1,590	
50, 51, 52	U235	0.0000	22.9000			0	632	Uranium
	U238	0.0000	1.3600			0	38	0
	Pu239/240	0.0000	1.1781			0	33	Transuranic
	Am241	0.0000	0.1700			0	5	0

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Media Samples Data Sheet

Site Sample ID / Nbr / Description	Nuclide	Sample (pCi/g)	Sample MDA (pCi/g)	Weight (g)	Surface Area (in²)	Sample Nuclide (dpm/100cm²)	Sample Nuclide MDA (dpm/100cm²)	Sample Total (dpm/100cm²)
05C0249-040.001 31	U234	0.0000	698.0000	2.30	26.3	0	2,101	
5	U235	0.0000	2.7400			0	8	Uranium
	U238	0.0000	16.6000			0	50	0
	Pu239/240	0.0000	15.5925			0	47	Transuranic
	Am241	0.0000	2.2500			0	7	0
05C0249-032.001 32	U234	0.0000	54.8000	21.20	26.3	0	1,520	
7	U235	0.0000	0.2040			0	6	Uranium
	U238	0.2510	0.5880			7	16	7
	Pu239/240	0.0000	1.1850			0	33	Transuranic
	Am241	0.0000	0.1710			0	5	0
05C0249-033.001 33	U234	0.0000	1.3300	22.20	26.3	0	39	
6, 10, 11, 15	U235	0.0000	0.2410			0	7	Uranium
	U238	0.0000	1.3300			0	39	0
	Pu239/240	0.0000	1.2751			0	37	Transuranic
	Am241	0.0000	0.1840			0	5	0
05C0249-034.001 34	U234	0.0000	54.8000	21.10	26.3	0	1,513	
12, 16, 17	U235	0.0000	0.2280			0	6	Uranium
	U238	0.0000	1.2600			0	35	0
	Pu239/240	0.0000	1.1712			0	32	Transuranic
	Am241	0.0000	0.1690			0	5	0
05C0249-035.001 35	U234	0.0000	44.7000	27.30	26.3	0	1,597	
20, 22, 27	U235	0.0000	0.1800			0	6	Uranium
	U238	0.0000	1.0600			0	38	0
	Pu239/240	0.0000	0.9979			0	36	Transuranic
	Am241	0.0000	0.1440			0	5	0
05C0249-036.001 36	U234	0.0000	54.1000	21.00	26.3	0	1,486	
32, 37	U235	0.0000	0.2080			0	6	Uranium
	U238	0.0000	1.2600			0	35	0
	Pu239/240	0.0000	1.0949			0	30	Transuranic
	Am241	0.0000	0.1580			0	4	0
05C0249-037.001 37	U234	0.0000	58.1000	19.90	26.3	0	1,513	
42, 45	U235	0.0000	0.2300			0	6	Uranium
	U238	0.0000	1.4300			0	37	0
	Pu239/240	0.0000	1.2613			0	33	Transuranic
	Am241	0.0000	0.1820			0	5	0

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440505PBP-N057	7	23.3	N/A	N/A
440505PBP-N058	7	17.0	N/A	N/A
440505PBP-N059	7	8.2	N/A	N/A
440505PBP-N060	7	11.3	N/A	N/A
440505PBP-N061	7	-6.5	N/A	N/A
440505PBP-N062	7	5.5	N/A	N/A
440505PBP-N063	7	29.0	N/A	N/A
440505PBP-N064	8	-2.9	N/A	N/A
440505PBP-N065	8	21.6	N/A	N/A
440505PBP-N066	8	-2.9	N/A	N/A

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440505PRP-N052	4	6.0	N/A	4	-2.3	N/A
440505PRP-N053	8	12.5	N/A	N/A	N/A	N/A
440505PRP-N054	8	18.5	N/A	N/A	N/A	N/A
440505PRP-N055	8	3.2	N/A	N/A	N/A	N/A
440505PRP-N056	8	6.5	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440505PRP-N026	7	-6.4	N/A	N/A	N/A	N/A
440505PRP-N027	4	6.0	N/A	4	3.6	N/A
440505PRP-N028	8	15.7	N/A	N/A	N/A	N/A
440505PRP-N029	8	6.5	N/A	N/A	N/A	N/A
440505PRP-N030	7	14.5	N/A	N/A	N/A	N/A
440505PRP-N031	7	14.5	N/A	N/A	N/A	N/A
440505PRP-N032	4	-3.1	N/A	4	3.6	N/A
440505PRP-N033	8	12.5	N/A	N/A	N/A	N/A
440505QRP-N034	7	24.0	N/A	N/A	N/A	N/A
440505PRP-N034	8	31.0	N/A	N/A	N/A	N/A
440505PRP-N035	7	2.5	N/A	N/A	N/A	N/A
440505PRP-N036	7	2.5	N/A	N/A	N/A	N/A
440505PRP-N037	4	-6.3	N/A	4	3.6	N/A
440505PRP-N038	8	12.5	N/A	N/A	N/A	N/A
440505PRP-N039	8	27.8	N/A	N/A	N/A	N/A
440505PRP-N040	7	11.4	N/A	N/A	N/A	N/A
440505PRP-N041	7	2.5	N/A	N/A	N/A	N/A
440505PRP-N042	4	-3.1	N/A	4	-11.3	N/A
440505PRP-N043	8	3.2	N/A	N/A	N/A	N/A
440505PRP-N044	8	-2.8	N/A	N/A	N/A	N/A
440505PRP-N045	4	-9.4	N/A	4	9.5	N/A
440505PRP-N046	4	-3.1	N/A	4	6.8	N/A
440505PRP-N047	4	-15.3	N/A	4	15.8	N/A
440505PRP-N048	8	3.2	N/A	N/A	N/A	N/A
440505PRP-N049	8	3.2	N/A	N/A	N/A	N/A
440505PRP-N050	4	-9.4	N/A	4	-8.6	N/A
440505PRP-N051	4	8.7	N/A	4	0.4	N/A

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440505PRP-N001	8	25.0	N/A	N/A	N/A	N/A
440505QRP-N002	7	3.6	N/A	N/A	N/A	N/A
440505PRP-N002	8	27.8	N/A	N/A	N/A	N/A
440505PRP-N003	8	18.5	N/A	N/A	N/A	N/A
440505PRP-N004	8	15.7	N/A	N/A	N/A	N/A
440505PRP-N005	1	-5.9	N/A	1	7.6	N/A
440505PRP-N006	1	-2.6	N/A	1	1.0	N/A
440505PRP-N007	1	-5.9	N/A	1	-8.4	N/A
440505PRP-N008	8	9.2	N/A	N/A	N/A	N/A
440505PRP-N009	8	18.5	N/A	N/A	N/A	N/A
440505PRP-N010	1	-4.5	N/A	1	1.0	N/A
440505PRP-N011	1	-3.1	N/A	1	7.6	N/A
440505PRP-N012	1	6.8	N/A	1	-1.8	N/A
440505PRP-N013	8	3.2	N/A	N/A	N/A	N/A
440505PRP-N014	8	15.7	N/A	N/A	N/A	N/A
440505PRP-N015	1	-5.9	N/A	1	-1.8	N/A
440505PRP-N016	1	-2.6	N/A	1	4.3	N/A
440505PRP-N017	1	0.2	N/A	1	26.3	N/A
440505PRP-N018	8	12.5	N/A	N/A	N/A	N/A
440505PRP-N019	8	21.7	N/A	N/A	N/A	N/A
440505PRP-N020	3	6.8	N/A	3	29.2	N/A
440505PRP-N021	7	-3.3	N/A	N/A	N/A	N/A
440505PRP-N022	3	-9.2	N/A	3	17.0	N/A
440505PRP-N023	8	15.7	N/A	N/A	N/A	N/A
440505PRP-N024	7	41.1	N/A	N/A	N/A	N/A
440505QRP-N024	8	18.3	N/A	N/A	N/A	N/A
440505PRP-N025	7	-0.6	N/A	N/A	N/A	N/A

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Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440505PBP-N057	9	-0.3	N/A	N/A
440505PBP-N058	10	3.3	N/A	N/A
440505PBP-N059	9	1.2	N/A	N/A
440505PBP-N060	10	-1.2	N/A	N/A
440505PBP-N061	9	-0.3	N/A	N/A
440505PBP-N062	10	0.3	N/A	N/A
440505PBP-N063	9	-0.3	N/A	N/A
440505PBP-N064	10	-1.2	N/A	N/A
440505PBP-N065	9	1.2	N/A	N/A
440505PBP-N066	10	0.3	N/A	N/A

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440505PRP-N030	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N031	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N032	6	0.3	N/A	6	1.8	N/A
440505PRP-N033	9	1.2	N/A	N/A	N/A	N/A
440505PRP-N034	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N035	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N036	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N037	5	-0.6	N/A	5	0.9	N/A
440505PRP-N038	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N039	10	0.3	N/A	N/A	N/A	N/A
440505PRP-N040	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N041	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N042	6	-1.2	N/A	6	3.3	N/A
440505PRP-N043	9	1.2	N/A	N/A	N/A	N/A
440505PRP-N044	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N045	5	-0.6	N/A	5	-0.6	N/A
440505PRP-N046	6	-1.2	N/A	6	0.3	N/A
440505PRP-N047	5	-0.6	N/A	5	0.9	N/A
440505PRP-N048	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N049	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N050	6	0.3	N/A	6	-1.2	N/A
440505PRP-N051	5	-0.6	N/A	5	3.9	N/A
440505PRP-N052	6	-1.2	N/A	6	-1.2	N/A
440505PRP-N053	9	1.2	N/A	N/A	N/A	N/A
440505PRP-N054	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N055	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N056	10	-1.2	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440505PRP-N001	9	2.7	N/A	N/A	N/A	N/A
440505PRP-N002	10	0.3	N/A	N/A	N/A	N/A
440505PRP-N003	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N004	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N005	2	0.6	N/A	2	-0.9	N/A
440505PRP-N006	2	0.6	N/A	2	0.6	N/A
440505PRP-N007	2	-0.9	N/A	2	2.1	N/A
440505PRP-N008	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N009	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N010	2	-0.9	N/A	2	-0.9	N/A
440505PRP-N011	2	0.6	N/A	2	2.1	N/A
440505PRP-N012	2	-0.9	N/A	2	0.6	N/A
440505PRP-N013	9	1.2	N/A	N/A	N/A	N/A
440505PRP-N014	10	0.3	N/A	N/A	N/A	N/A
440505PRP-N015	2	-0.9	N/A	2	2.1	N/A
440505PRP-N016	2	-0.9	N/A	2	2.1	N/A
440505PRP-N017	2	-0.9	N/A	2	-0.9	N/A
440505PRP-N018	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N019	10	1.8	N/A	N/A	N/A	N/A
440505PRP-N020	5	-0.6	N/A	5	0.9	N/A
440505PRP-N021	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N022	6	-1.2	N/A	6	1.8	N/A
440505PRP-N023	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N024	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N025	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N026	10	-1.2	N/A	N/A	N/A	N/A
440505PRP-N027	5	-0.6	N/A	5	-0.6	N/A
440505PRP-N028	9	-0.3	N/A	N/A	N/A	N/A
440505PRP-N029	10	-1.2	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Comments Sheet

General Comments: N/A

TSA Comments: For instruments that were used for both TSAs and scans (T/S) on the Instrument Data Sheet, The TSA A-Priori MDA is 48.0 and the scan A-Priori MDA is 300.0.

RSA Comments: N/A

Media Comments: Media samples were collected from floor surfaces only. The other survey unit surfaces were unpainted or factory original paint.

Survey Area: 5	Survey Unit: 440505	Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	511466	04/28/05	Electra	3370	DP-6	07/27/05	0.213	NA	48.0	NA	T/S
2	515538	04/28/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
3	515538	05/02/05	Electra	3370	DP-6	07/27/05	0.213	NA	48.0	NA	T/S
4	511466	05/02/05	Electra	2352	DP-6	06/09/05	0.221	NA	48.0	NA	T/S
5	511466	05/02/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
6	511466	05/02/05	SAC-4	1130	NA	07/03/05	0.330	NA	10.0	NA	R
7	515538	05/18/05	Electra	3254	DP-6	07/04/05	0.225	NA	48.0	NA	T/Q/S
8	511466	05/18/05	Electra	3102	DP-6	06/16/05	0.216	NA	48.0	NA	T/Q/S
9	515538	05/19/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
10	515538	05/19/05	SAC-4	1130	NA	07/03/05	0.330	NA	10.0	NA	R

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

Survey Area: 5 Survey Unit: 440505 Building: 440

Description: Building 440 Westside Interior, Room 113 all surfaces <2m

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 42 Nbr Biased Measurements Required: 10 Nbr QC Required: 3

Nbr Random Measurements Performed: 56 Nbr Biased Measurements Performed: 10 Nbr QC Performed: 3

Alpha

Maximum:	41.1 dpm/100cm²
Minimum:	-15.3 dpm/100cm²
Mean:	6.5 dpm/100cm²
Standard Deviation:	11.4
QC Maximum:	24.0 dpm/100cm²
QC Minimum:	3.6 dpm/100cm²
QC Mean:	15.3 dpm/100cm²
Transuranic DCGLw:	100.0 dpm/100cm²
Transuranic DCGLemc:	300.0 dpm/100cm²

Removable Surface Activity Measurements

Nbr Random Measurements Required: 42 Nbr Biased Measurements Required: 10

Nbr Random Measurements Performed: 56 Nbr Biased Measurements Performed: 10

Alpha

Maximum:	3.9 dpm/100cm²
Minimum:	-1.2 dpm/100cm²
Mean:	0.0 dpm/100cm²
Standard Deviation:	1.2
Transuranic DCGLw:	20.0 dpm/100cm²

Media Sample Results

Nbr Random Required: 21 Nbr Biased Required: 0

Nbr Random Collected: 21 Nbr Biased Collected: 0

Uranium

Maximum:	7 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	1 dpm/100cm²
Standard Deviation:	2
Uranium DCGLw:	5,000 dpm/100cm²
Uranium DCGLemc:	15,000 dpm/100cm²

Transuranic

Maximum:	0 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	0 dpm/100cm²
Standard Deviation:	0
Transuranic DCGLw:	100 dpm/100cm²
Transuranic DCGLemc:	300 dpm/100cm²

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

Survey Area: 5	Survey Unit: 440504	Building: 440

Description: Building 440 Westside Interior, Room 123A (interior of permacon) all surfaces

Media Samples Data Sheet

Site Sample ID / Nbr / Description	Nuclide	Sample (pCi/g)	Sample MDA (pCi/g)	Weight (g)	Surface Area (in²)	Sample Nuclide (dpm/100cm²)	Sample Nuclide MDA (dpm/100cm²)	Sample Total (dpm/100cm²)
05C0249-032.001 32	U234	0.0000	54.8000	21.20	26.3	0	1,520	
13	U235	0.0000	0.2040			0	6	Uranium
	U238	0.2510	0.5880			7	16	7
	Pu239/240	0.0000	1.1850			0	33	Transuranic
	Am241	0.0000	0.1710			0	5	0
05C0249-042.001 42	U234	0.0000	48.0000	37.70	26.3	0	2,368	
11	U235	0.3330	0.1850			16	9	Uranium
	U238	1.5700	1.1800			77	58	94
	Pu239/240	0.0000	1.3098			0	65	Transuranic
	Am241	0.0000	0.1890			0	9	0
05C0249-043.001 43	U234	0.0000	55.6000	32.10	26.3	0	2,335	
12	U235	0.3080	0.1970			13	8	Uranium
	U238	1.5800	1.3800			66	58	79
	Pu239/240	0.0000	1.3375			0	56	Transuranic
	Am241	0.0000	0.1930			0	8	0

Survey Area: 5	Survey Unit: 440504	Building: 440

Description: Building 440 Westside Interior, Room 123A (interior of permacon) all surfaces

Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440504PBP-N018	7	-2.0	N/A	N/A
440504PBP-N019	7	-2.0	N/A	N/A
440504PBP-N020	7	1.2	N/A	N/A
440504PBP-N021	7	13.7	N/A	N/A
440504PBP-N022	7	-2.0	N/A	N/A
440504PBP-N023	7	1.2	N/A	N/A
440504PBP-N024	7	1.2	N/A	N/A
440504PBP-N025	7	-4.8	N/A	N/A
440504PBP-N026	7	1.2	N/A	N/A
440504PBP-N027	7	-4.8	N/A	N/A

Survey Area: 5	Survey Unit: 440504	Building: 440

Description: Building 440 Westside Interior, Room 123A (interior of permacon) all surfaces

Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440504PRP-N001	7	4.5	N/A	N/A	N/A	N/A
440504PRP-N002	7	1.3	N/A	N/A	N/A	N/A
440504PRP-N003	7	4.5	N/A	N/A	N/A	N/A
440504PRP-N004	7	-1.5	N/A	N/A	N/A	N/A
440504PRP-N005	7	23.0	N/A	N/A	N/A	N/A
440504PRP-N006	7	7.8	N/A	N/A	N/A	N/A
440504PRP-N007	7	23.0	N/A	N/A	N/A	N/A
440504PRP-N008	7	13.8	N/A	N/A	N/A	N/A
440504PRP-N009	7	44.8	N/A	N/A	N/A	N/A
440504PRP-N010	2	58.4	N/A	2	2.9	N/A
440504PRP-N011	2	25.4	N/A	2	6.1	N/A
440504PRP-N012	2	7.3	N/A	2	12.0	N/A
440504PRP-N013	2	-1.8	N/A	2	2.9	N/A
440504PRP-N014	7	7.8	N/A	N/A	N/A	N/A
440504PRP-N015	7	19.8	N/A	N/A	N/A	N/A
440504QRP-N015	8	6.3	N/A	N/A	N/A	N/A
440504PRP-N016	7	13.8	N/A	N/A	N/A	N/A
440504PRP-N017	7	24.4	N/A	N/A	N/A	N/A
440504QRP-N017	8	22.3	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440504	Building: 440

Description: Building 440 Westside Interior, Room 123A (interior of permacon) all surfaces

Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440504PBP-N018	9	-0.6	N/A	N/A
440504PBP-N019	9	0.9	N/A	N/A
440504PBP-N020	9	2.4	N/A	N/A
440504PBP-N021	9	-0.6	N/A	N/A
440504PBP-N022	9	0.9	N/A	N/A
440504PBP-N023	9	0.9	N/A	N/A
440504PBP-N024	9	-0.6	N/A	N/A
440504PBP-N025	9	-0.6	N/A	N/A
440504PBP-N026	9	0.9	N/A	N/A
440504PBP-N027	9	0.9	N/A	N/A

Survey Area: 5	Survey Unit: 440504	Building: 440

Description: Building 440 Westside Interior, Room 123A (interior of permacon) all surfaces

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440504PRP-N001	9	0.9	N/A	N/A	N/A	N/A
440504PRP-N002	9	0.9	N/A	N/A	N/A	N/A
440504PRP-N003	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N004	9	0.9	N/A	N/A	N/A	N/A
440504PRP-N005	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N006	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N007	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N008	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N009	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N010	1	-0.3	N/A	1	-0.3	N/A
440504PRP-N011	1	1.2	N/A	1	-0.3	N/A
440504PRP-N012	1	-0.3	N/A	1	1.2	N/A
440504PRP-N013	1	-0.3	N/A	1	4.2	N/A
440504PRP-N014	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N015	9	0.9	N/A	N/A	N/A	N/A
440504PRP-N016	9	-0.6	N/A	N/A	N/A	N/A
440504PRP-N017	9	-0.6	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440504	Building: 440

Description: Building 440 Westside Interior, Room 123A (interior of permacon) all surfaces

Comments Sheet

General Comments: N/A

TSA Comments: For instruments that were used for both TSAs and scans (T/S) on the Instrument Data Sheet, The TSA A-Priori MDA is 48.0 and the scan A-Priori MDA is 300.0.

1. Locations 22-27 were taken on ventilation duct and horizontal surfaces in the overhead.
2. During surveys and media sampling of Survey Unit 440504, fixed contamination above the transuranic DCGLw (100 dpm/100 cm2) was identified in the paint and on top of the paint of the west end of Room 123A floor. Although the area of contamination was only a few small localized spots within a one square meter area, the assumed contaminated area boundary was expanded to the east to the boundary line of the next clean media sample (#11). Four surface measurements were obtained at elevated locations on the floor in the red area of the survey unit map. All removable measurements were less than the transuranic removable DCGLw (20 dpm/100 cm2). The alpha direct measurement results are as follows:
28 - 333.1 dpm/100cm2
29 - 106.2 dpm/100cm2
30 - 6,474.7 dpm/100cm2
31 - 92.3 dpm/100cm2
The floor area indicated in red on the survey unit map has been removed from this survey unit. The contaminated area of the floor will be protected prior to demolition, and removed and managed as low-level waste (LLW) during slab removal.

RSA Comments: N/A

Media Comments: Media samples were collected from floor surfaces only. The other survey unit surfaces were unpainted or factory original paint.

Media sample (paint) location 10 was contaminated with transuranic activity of 430 dpm/100cm2, which is above the transuranic DCGLw. The floor area west of location 11 (which was a clean paint sample) has been marked with colored paint to indicate the LLW area. The contaminated area of the floor will be protected prior to demolition, and removed and managed as low-level waste (LLW) during slab removal. Refer to Section 3.0 of the PDSR and TSA comments above for further discussion.

Survey Area: 5	Survey Unit: 440504	Building: 440

Description: Building 440 Westside Interior, Room 123A (interior of permacon) all surfaces

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	515538	05/02/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
2	515538	05/02/05	Electra	2352	DP-6	06/09/05	0.221	NA	48.0	NA	T/S
3	510838	05/26/05	Electra	674	AP-6	08/02/05	0.182	NA	300.0	NA	S
4	510766	05/26/05	Electra	281	AP-6	09/17/05	0.180	NA	300.0	NA	S
5	510766	05/26/05	Electra	3127	DP-6	08/21/05	0.206	NA	300.0	NA	S
6	510838	05/26/05	Electra	3102	DP-6	06/16/05	0.216	NA	48.0	NA	T/S
7	511466	05/31/05	Electra	3102	DP-6	06/16/05	0.216	NA	48.0	NA	T/S
8	510766	05/31/05	Electra	3127	DP-6	08/21/05	0.206	NA	48.0	NA	Q
9	511466	05/31/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Media Samples Data Sheet

Site Sample ID / Nbr Description	Nuclide	Sample (pCi/g)	Sample MDA (pCi/g)	Weight (g)	Surface Area (in^2)	Sample Nuclide ($dpm/100cm^2$)	Sample Nuclide MDA ($dpm/100cm^2$)	Sample Total ($dpm/100cm^2$)
05C0249-029.001 29	U234	0.0000	65.8000	17.10	26.3	0	1,472	
1	U235	0.1170	0.1760			3	4	Uranium
	U238	0.0000	1.5600			0	35	3
	Pu239/240	0.0000	1.4622			0	33	Transuranic
	Am241	0.0000	0.2110			0	5	0
05C0249-030.001 30	U234	0.0000	49.9000	24.00	26.3	0	1,567	
4, 7	U235	0.0000	0.2070			0	7	Uranium
	U238	0.0000	1.2200			0	38	0
	Pu239/240	0.0000	1.0880			0	34	Transuranic
	Am241	0.0000	0.1570			0	5	0

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440503PBP-N016	9	11.5	N/A	N/A
440503PBP-N017	9	2.6	N/A	N/A
440503PBP-N018	10	15.5	N/A	N/A
440503PBP-N019	10	0.2	N/A	N/A
440503PBP-N020	10	1.6	N/A	N/A
440503PBP-N021	10	-9.0	N/A	N/A
440503PBP-N022	10	3.5	N/A	N/A
440503PBP-N023	10	3.5	N/A	N/A
440503PBP-N024	10	-9.0	N/A	N/A
440503PBP-N025	13	4.5	N/A	N/A
440503PBP-N026	13	-5.2	N/A	N/A

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440503PRP-N001	1	-9.7	N/A	1	-12.4	N/A
440503PRP-N002	5	10.9	N/A	N/A	N/A	N/A
440503PRP-N003	6	18.0	N/A	N/A	N/A	N/A
440503PRP-N004	1	3.0	N/A	1	-0.2	N/A
440503PRP-N005	8	24.5	N/A	N/A	N/A	N/A
440503QRP-N005	13	1.7	N/A	N/A	N/A	N/A
440503PRP-N006	8	21.2	N/A	N/A	N/A	N/A
440503QRP-N006	13	1.7	N/A	N/A	N/A	N/A
440503PRP-N007	1	-6.4	N/A	1	3.1	N/A
440503PRP-N008	5	5.1	N/A	N/A	N/A	N/A
440503PRP-N009	6	6.0	N/A	N/A	N/A	N/A
440503PRP-N010	13	13.3	N/A	N/A	N/A	N/A
440503PRP-N011	8	2.7	N/A	N/A	N/A	N/A
440503PRP-N012	13	13.3	N/A	N/A	N/A	N/A
440503PRP-N013	13	9.9	N/A	N/A	N/A	N/A
440503PRP-N014	13	9.9	N/A	N/A	N/A	N/A
440503PRP-N015	13	16.7	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440503PBP-N016	12	-1.2	N/A	N/A
440503PBP-N017	11	-0.3	N/A	N/A
440503PBP-N018	12	-1.2	N/A	N/A
440503PBP-N019	11	1.2	N/A	N/A
440503PBP-N020	12	-1.2	N/A	N/A
440503PBP-N021	11	-0.3	N/A	N/A
440503PBP-N022	12	0.3	N/A	N/A
440503PBP-N023	11	-0.3	N/A	N/A
440503PBP-N024	12	0.3	N/A	N/A
440503PBP-N025	14	1.2	N/A	N/A
440503PBP-N026	14	-0.3	N/A	N/A

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440503PRP-N001	2	-0.3	N/A	2	-0.3	N/A
440503PRP-N002	7	3.9	N/A	N/A	N/A	N/A
440503PRP-N003	7	5.5	N/A	N/A	N/A	N/A
440503PRP-N004	2	1.2	N/A	2	2.7	N/A
440503PRP-N005	11	-0.3	N/A	N/A	N/A	N/A
440503PRP-N006	12	-1.2	N/A	N/A	N/A	N/A
440503PRP-N007	2	1.2	N/A	2	-0.3	N/A
440503PRP-N008	7	0.9	N/A	N/A	N/A	N/A
440503PRP-N009	7	2.4	N/A	N/A	N/A	N/A
440503PRP-N010	14	2.7	N/A	N/A	N/A	N/A
440503PRP-N011	11	-0.3	N/A	N/A	N/A	N/A
440503PRP-N012	14	1.2	N/A	N/A	N/A	N/A
440503PRP-N013	14	1.2	N/A	N/A	N/A	N/A
440503PRP-N014	14	-0.3	N/A	N/A	N/A	N/A
440503PRP-N015	14	-0.3	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Comments Sheet

General Comments: N/A

TSA Comments: For instruments that were used for both TSAs and scans (T/S) on the Instrument Data Sheet, The TSA A-Priori MDA is 48.0 and the scan A-Priori MDA is 300.0.

RSA Comments: N/A

Media Comments: Media samples were collected from floor surfaces only. The other survey unit surfaces were unpainted or factory original paint.

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	511466	05/02/05	Electra	3370	DP-6	07/27/05	0.213	NA	48.0	NA	T/S
2	511466	05/02/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
3	515538	05/16/05	Electra	674	AP-6	08/02/05	0.182	NA	300.0	NA	S
4	511466	05/16/05	Electra	281	AP-6	09/17/05	0.180	NA	300.0	NA	S
5	515538	05/17/05	Electra	3254	DP-6	07/04/05	0.225	NA	48.0	NA	T/S
6	511466	05/17/05	Electra	3102	DP-6	06/16/05	0.216	NA	48.0	NA	T/S
7	515538	05/18/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
8	515538	05/18/05	Electra	3102	DP-6	06/16/05	0.216	NA	48.0	NA	T/S
9	511466	05/18/05	Electra	3254	DP-6	07/04/05	0.225	NA	48.0	NA	T/S
10	511466	05/19/05	Electra	3102	DP-6	06/16/05	0.216	NA	48.0	NA	T/S
11	515538	05/19/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
12	515538	05/19/05	SAC-4	1130	NA	07/03/05	0.330	NA	10.0	NA	R
13	513922	05/25/05	Electra	3127	DP-6	08/21/05	0.206	NA	48.0	NA	T/Q/S
14	515538	05/25/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
15	513922	05/26/05	Electra	680	AP-6	07/07/05	0.172	NA	300.0	NA	S
16	510838	05/26/05	Electra	281	AP-6	09/17/05	0.180	NA	300.0	NA	S
17	510766	05/26/05	Electra	674	AP-6	08/02/05	0.182	NA	300.0	NA	S
18	510766	05/26/05	Electra	3127	DP-6	08/21/05	0.206	NA	300.0	NA	S
19	510838	05/26/05	Electra	3102	DP-6	06/16/05	0.216	NA	300.0	NA	S

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

Survey Area: 5	Survey Unit: 440503	Building: 440

Description: Building 440 Westside Interior, Rooms 112, 120, 121, 122, 122A, 122B, 123 and 123A (exterior of permacon), all surfaces

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 10 | Nbr QC Required: 2

Nbr Random Measurements Performed: 15 | Nbr Biased Measurements Performed: 11 | Nbr QC Performed: 2

Alpha

Maximum:	24.5 dpm/100cm²
Minimum:	-12.4 dpm/100cm²
Mean:	5.1 dpm/100cm²
Standard Deviation:	9.6
QC Maximum:	1.7 dpm/100cm²
QC Minimum:	1.7 dpm/100cm²
QC Mean:	1.7 dpm/100cm²
Transuranic DCGLw:	100.0 dpm/100cm²
Transuranic DCGLEMC:	300.0 dpm/100cm²

Removable Surface Activity Measurements

Nbr Random Measurements Required: 15 | Nbr Biased Measurements Required: 10

Nbr Random Measurements Performed: 15 | Nbr Biased Measurements Performed: 11

Alpha

Maximum:	5.5 dpm/100cm²
Minimum:	-1.2 dpm/100cm²
Mean:	0.6 dpm/100cm²
Standard Deviation:	1.6
Transuranic DCGLw:	20.0 dpm/100cm²

Media Sample Results

Nbr Random Required: 3 | Nbr Biased Required: 0

Nbr Random Collected: 3 | Nbr Biased Collected: 0

Uranium

Maximum:	3 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	2 dpm/100cm²
Standard Deviation:	2
Uranium DCGLw:	5,000 dpm/100cm²
Uranium DCGLEMC:	15,000 dpm/100cm²

Transuranic

Maximum:	0 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	0 dpm/100cm²
Standard Deviation:	0
Transuranic DCGLw:	100 dpm/100cm²
Transuranic DCGLEMC:	300 dpm/100cm²

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

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Media Samples Data Sheet

Site Sample ID / Nbr / Description	Nuclide	Sample (pCi/g)	Sample MDA (pCi/g)	Weight (g)	Surface Area (in²)	Sample Nuclide (dpm/100cm²)	Sample Nuclide MDA (dpm/100cm²)	Sample Total (dpm/100cm²)
05Z1190-016.001 16 8, 10, 11	U234	0.0000	66.2000	20.70	26.3	0	1,793	
	U235	0.0000	0.3550			0	10	Uranium
	U238	0.0000	1.0900			0	30	0
	Pu239/240	0.0000	1.3375			0	36	Transuranic
	Am241	0.0000	0.1930			0	5	0
05Z1190-017.001 17 6, 19, 21	U234	0.0000	74.8000	17.80	26.3	0	1,742	
	U235	0.0000	0.3120			0	7	Uranium
	U238	0.0000	1.1700			0	27	0
	Pu239/240	0.0000	1.5454			0	36	Transuranic
	Am241	0.0000	0.2230			0	5	0
05Z1190-018.001 18 20, 22, 43	U234	0.0000	67.0000	24.80	26.3	0	2,174	
	U235	0.1490	0.1560			5	5	Uranium
	U238	0.0000	0.8570			0	28	5
	Pu239/240	0.0000	1.3583			0	44	Transuranic
	Am241	0.0000	0.1960			0	6	0
05Z1190-019.001 19 7	U234	0.0000	73.0000	17.10	26.3	0	1,633	
	U235	0.0000	0.3010			0	7	Uranium
	U238	0.0000	1.8100			0	41	0
	Pu239/240	0.0000	1.6008			0	36	Transuranic
	Am241	0.0000	0.2310			0	5	0

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

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Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440502PBP-N047	8	3.8	N/A	N/A
440502PBP-N048	8	6.5	N/A	N/A
440502PBP-N049	8	6.5	N/A	N/A
440502PBP-N050	8	3.8	N/A	N/A
440502PBP-N051	9	13.7	N/A	N/A
440502PBP-N052	8	-2.5	N/A	N/A
440502PBP-N053	8	-5.2	N/A	N/A
440502PBP-N054	8	3.8	N/A	N/A
440502PBP-N055	8	0.6	N/A	N/A
440502PBP-N056	8	-2.5	N/A	N/A

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

rev. 1

Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440502PRP-N028	4	-0.3	N/A	N/A	N/A	N/A
440502PRP-N029	4	-3.6	N/A	N/A	N/A	N/A
440502PRP-N030	10	14.1	N/A	N/A	N/A	N/A
440502PRP-N031	9	9.1	N/A	N/A	N/A	N/A
440502PRP-N032	9	2.5	N/A	N/A	N/A	N/A
440502PRP-N033	9	9.1	N/A	N/A	N/A	N/A
440502PRP-N034	9	11.9	N/A	N/A	N/A	N/A
440502PRP-N035	8	-9.8	N/A	N/A	N/A	N/A
440502PRP-N036	4	21.3	N/A	N/A	N/A	N/A
440502QRP-N036	10	11.6	N/A	N/A	N/A	N/A
440502PRP-N037	4	18.5	N/A	N/A	N/A	N/A
440502PRP-N038	4	62.1	N/A	N/A	N/A	N/A
440502QRP-N038	10	18.9	N/A	N/A	N/A	N/A
440502PRP-N039	4	11.9	N/A	N/A	N/A	N/A
440502PRP-N040	4	2.5	N/A	N/A	N/A	N/A
440502PRP-N041	4	-0.3	N/A	N/A	N/A	N/A
440502PRP-N042	4	27.8	N/A	N/A	N/A	N/A
440502QRP-N042	10	18.9	N/A	N/A	N/A	N/A
440502PRP-N043	1	-7.1	N/A	1	16.2	N/A
440502PRP-N044	9	18.5	N/A	N/A	N/A	N/A
440502PRP-N045	4	18.5	N/A	N/A	N/A	N/A
440502PRP-N046	4	2.5	N/A	N/A	N/A	N/A

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Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

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Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440502PRP-N001	4	-8.3	N/A	N/A	N/A	N/A
440502PRP-N002	9	-0.3	N/A	N/A	N/A	N/A
440502PRP-N003	9	-0.3	N/A	N/A	N/A	N/A
440502PRP-N004	9	2.5	N/A	N/A	N/A	N/A
440502PRP-N005	9	15.2	N/A	N/A	N/A	N/A
440502PRP-N006	1	14.0	N/A	1	10.4	N/A
440502PRP-N007	1	8.2	N/A	1	19.4	N/A
440502PRP-N008	1	-0.8	N/A	1	1.4	N/A
440502PRP-N009	8	1.9	N/A	N/A	N/A	N/A
440502PRP-N010	1	5.0	N/A	1	10.4	N/A
440502PRP-N011	1	14.0	N/A	1	19.4	N/A
440502PRP-N012	8	5.1	N/A	N/A	N/A	N/A
440502PRP-N013	4	15.2	N/A	N/A	N/A	N/A
440502PRP-N014	9	4.4	N/A	N/A	N/A	N/A
440502PRP-N015	9	5.8	N/A	N/A	N/A	N/A
440502PRP-N016	9	-0.3	N/A	N/A	N/A	N/A
440502PRP-N017	9	11.9	N/A	N/A	N/A	N/A
440502PRP-N018	10	-4.0	N/A	N/A	N/A	N/A
440502PRP-N019	1	10.9	N/A	1	31.1	N/A
440502PRP-N020	1	19.9	N/A	1	19.4	N/A
440502PRP-N021	1	17.2	N/A	1	16.2	N/A
440502PRP-N022	1	-7.1	N/A	1	4.1	N/A
440502PRP-N023	8	-4.0	N/A	N/A	N/A	N/A
440502PRP-N024	8	1.9	N/A	N/A	N/A	N/A
440502PRP-N025	4	5.8	N/A	N/A	N/A	N/A
440502PRP-N026	10	29.1	N/A	N/A	N/A	N/A
440502PRP-N027	10	1.9	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

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Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440502PBP-N047	13	0.0	N/A	N/A
440502PBP-N048	14	-1.8	N/A	N/A
440502PBP-N049	13	1.5	N/A	N/A
440502PBP-N050	14	-1.8	N/A	N/A
440502PBP-N051	13	0.0	N/A	N/A
440502PBP-N052	14	-0.3	N/A	N/A
440502PBP-N053	13	0.0	N/A	N/A
440502PBP-N054	14	-0.3	N/A	N/A
440502PBP-N055	13	4.5	N/A	N/A
440502PBP-N056	14	-1.8	N/A	N/A

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

rev. 1

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440502PRP-N030	14	-1.8	N/A	N/A	N/A	N/A
440502PRP-N031	13	0.0	N/A	N/A	N/A	N/A
440502PRP-N032	14	-0.3	N/A	N/A	N/A	N/A
440502PRP-N033	13	0.0	N/A	N/A	N/A	N/A
440502PRP-N034	14	-1.8	N/A	N/A	N/A	N/A
440502PRP-N035	13	3.0	N/A	N/A	N/A	N/A
440502PRP-N036	7	0.0	N/A	N/A	N/A	N/A
440502PRP-N037	7	6.1	N/A	N/A	N/A	N/A
440502PRP-N038	7	1.5	N/A	N/A	N/A	N/A
440502PRP-N039	7	0.0	N/A	N/A	N/A	N/A
440502PRP-N040	7	1.5	N/A	N/A	N/A	N/A
440502PRP-N041	7	3.0	N/A	N/A	N/A	N/A
440502PRP-N042	7	0.0	N/A	N/A	N/A	N/A
440502PRP-N043	2	-0.3	N/A	2	-0.3	N/A
440502PRP-N044	13	1.5	N/A	N/A	N/A	N/A
440502PRP-N045	7	3.0	N/A	N/A	N/A	N/A
440502PRP-N046	7	0.0	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

rev. 1

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440502PRP-N001	7	1.5	N/A	N/A	N/A	N/A
440502PRP-N002	14	-1.8	N/A	N/A	N/A	N/A
440502PRP-N003	13	0.0	N/A	N/A	N/A	N/A
440502PRP-N004	14	1.2	N/A	N/A	N/A	N/A
440502PRP-N005	13	1.5	N/A	N/A	N/A	N/A
440502PRP-N006	2	-0.3	N/A	2	1.2	N/A
440502PRP-N007	2	-0.3	N/A	2	1.2	N/A
440502PRP-N008	2	1.2	N/A	2	-0.3	N/A
440502PRP-N009	14	1.2	N/A	N/A	N/A	N/A
440502PRP-N010	2	1.2	N/A	2	-0.3	N/A
440502PRP-N011	2	-0.3	N/A	2	2.7	N/A
440502PRP-N012	13	0.0	N/A	N/A	N/A	N/A
440502PRP-N013	7	0.0	N/A	N/A	N/A	N/A
440502PRP-N014	13	1.5	N/A	N/A	N/A	N/A
440502PRP-N015	14	-0.3	N/A	N/A	N/A	N/A
440502PRP-N016	13	0.0	N/A	N/A	N/A	N/A
440502PRP-N017	14	-0.3	N/A	N/A	N/A	N/A
440502PRP-N018	13	0.0	N/A	N/A	N/A	N/A
440502PRP-N019	2	-0.3	N/A	2	1.2	N/A
440502PRP-N020	2	-0.3	N/A	2	1.2	N/A
440502PRP-N021	2	-0.3	N/A	2	2.7	N/A
440502PRP-N022	2	-0.3	N/A	2	-0.3	N/A
440502PRP-N023	14	-1.8	N/A	N/A	N/A	N/A
440502PRP-N024	14	1.2	N/A	N/A	N/A	N/A
440502PRP-N025	7	0.0	N/A	N/A	N/A	N/A
440502PRP-N026	13	1.5	N/A	N/A	N/A	N/A
440502PRP-N027	13	0.0	N/A	N/A	N/A	N/A
440502PRP-N028	7	1.5	N/A	N/A	N/A	N/A
440502PRP-N029	7	0.0	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

rev. 1

Comments Sheet

General Comments: N/A

TSA Comments: For instruments that were used for both TSAs and scans (T/S) on the Instrument Data Sheet, The TSA A-Priori MDA is 48.0 and the scan A-Priori MDA is 300.0.

RSA Comments: N/A

Media Comments: Media samples were collected from floor surfaces only. The other survey unit surfaces were unpainted or factory original paint.

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

rev. 1

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	515538	04/27/05	Electra	1379	DP-6	05/09/05	0.222	NA	48.0	NA	T/S
2	511466	04/27/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
3	511466	05/09/05	Electra	659	DP-8	08/28/05	0.167	NA	300.0	NA	S
4	513922	05/10/05	Electra	3370	DP-6	07/27/05	0.213	NA	48.0	NA	T/S
5	511466	05/10/05	Electra	1261	DP-8	07/27/05	0.171	NA	300.0	NA	S
6	515538	05/10/05	Electra	659	DP-8	08/28/05	0.167	NA	300.0	NA	S
7	515538	05/11/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
8	513922	05/12/05	Electra	2352	DP-6	06/09/05	0.221	NA	48.0	NA	T/S
9	511466	05/12/05	Electra	3370	DP-6	07/27/05	0.213	NA	48.0	NA	T/S
10	515538	05/12/05	Electra	2352	DP-6	06/09/05	0.221	NA	48.0	NA	T/Q/S
11	515538	05/12/05	Electra	676	AP-6	08/01/05	0.183	NA	300.0	NA	S
12	511466	05/12/05	Electra	281	AP-6	09/17/05	0.180	NA	300.0	NA	S
13	515538	05/12/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
14	515538	05/12/05	SAC-4	1130	NA	07/03/05	0.330	NA	10.0	NA	R

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

Survey Area: 5	Survey Unit: 440502	Building: 440

Description: Building 440 Westside Interior, Rooms 101, 101A, 102, 102A, 103 - 111, and 114 - 119, all surfaces

Rev. 1

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 44 | Nbr Biased Measurements Required: 10 | Nbr QC Required: 3

Nbr Random Measurements Performed: 46 | Nbr Biased Measurements Performed: 10 | Nbr QC Performed: 3

Alpha

Maximum:	62.1 dpm/100cm²
Minimum:	-9.8 dpm/100cm²
Mean:	8.3 dpm/100cm²
Standard Deviation:	11.5
QC Maximum:	18.9 dpm/100cm²
QC Minimum:	11.6 dpm/100cm²
QC Mean:	16.4 dpm/100cm²
Transuranic DCGLw:	100.0 dpm/100cm²
Transuranic DCGLemc:	300.0 dpm/100cm²

Removable Surface Activity Measurements

Nbr Random Measurements Required: 44 | Nbr Biased Measurements Required: 10

Nbr Random Measurements Performed: 46 | Nbr Biased Measurements Performed: 10

Alpha

Maximum:	6.1 dpm/100cm²
Minimum:	-1.8 dpm/100cm²
Mean:	0.5 dpm/100cm²
Standard Deviation:	1.5
Transuranic DCGLw:	20.0 dpm/100cm²

Media Sample Results

Nbr Random Required: 10 | Nbr Biased Required: 0

Nbr Random Collected: 10 | Nbr Biased Collected: 0

Uranium

Maximum:	5 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	1 dpm/100cm²
Standard Deviation:	3
Uranium DCGLw:	5,000 dpm/100cm²
Uranium DCGLemc:	15,000 dpm/100cm²

Transuranic

Maximum:	0 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	0 dpm/100cm²
Standard Deviation:	0
Transuranic DCGLw:	100 dpm/100cm²
Transuranic DCGLemc:	300 dpm/100cm²

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

Survey Area: 5	Survey Unit: 440501	Building: 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Media Samples Data Sheet

Site Sample ID / Nbr / Description	Nuclide	Sample (pCi/g)	Sample MDA (pCi/g)	Weight (g)	Surface Area (in^2)	Sample Nuclide ($dpm/100cm^2$)	Sample Nuclide MDA ($dpm/100cm^2$)	Sample Total ($dpm/100cm^2$)
05Z1190-016.001 12	U234	0.0000	66.2000	20.70	26.3	0	1,793	
8	U235	0.0000	0.3550			0	10	Uranium
	U238	0.0000	1.0900			0	30	0
	Pu239/240	0.0000	1.3375			0	36	Transuranic
	Am241	0.0000	0.1930			0	5	0
05Z1190-017.001 17	U234	0.0000	74.8000	17.80	26.3	0	1,742	
16	U235	0.0000	0.3120			0	7	Uranium
	U238	0.0000	1.1700			0	27	0
	Pu239/240	0.0000	1.5454			0	36	Transuranic
	Am241	0.0000	0.2230			0	5	0
05Z1190-019.001 19	U234	0.0000	74.8000	17.80	26.3	0	1,742	
17, 18, 24	U235	0.0000	0.3120			0	7	Uranium
	U238	0.0000	1.1700			0	27	0
	Pu239/240	0.0000	1.5454			0	36	Transuranic
	Am241	0.0000	0.2230			0	5	0

Survey Area: 5	Survey Unit: 440501	Building: 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Biased Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440501PBP-N033	7	16.4	N/A	N/A
440501PBP-N034	7	10.3	N/A	N/A
440501PBP-N035	7	19.7	N/A	N/A
440501PBP-N036	7	13.1	N/A	N/A
440501PBP-N037	7	29.0	N/A	N/A
440501PBP-N038	7	10.3	N/A	N/A
440501PBP-N039	7	19.7	N/A	N/A
440501PBP-N040	7	13.1	N/A	N/A
440501PBP-N041	7	-2.4	N/A	N/A
440501PBP-N042	7	-1.0	N/A	N/A
440501PBP-N043	7	7.0	N/A	N/A
440501PBP-N044	7	19.7	N/A	N/A
440501PBP-N045	7	19.7	N/A	N/A
440501PBP-N046	7	7.0	N/A	N/A
440501PBP-N047	8	7.0	N/A	N/A
440501PBP-N048	8	10.3	N/A	N/A
440501PBP-N049	7	3.7	N/A	N/A
440501PBP-N050	7	-2.4	N/A	N/A
440501PBP-N051	9	14.0	N/A	N/A

Survey Area: 5	Survey Unit: 440501	Building: 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Random/QC Total Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440501PRP-N027	9	7.2	N/A	N/A	N/A	N/A
440501PRP-N028	7	22.0	N/A	N/A	N/A	N/A
440501QRP-N028	9	11.8	N/A	N/A	N/A	N/A
440501PRP-N029	7	31.4	N/A	N/A	N/A	N/A
440501PRP-N030	8	12.6	N/A	N/A	N/A	N/A
440501PRP-N031	8	19.2	N/A	N/A	N/A	N/A
440501PRP-N032	9	9.0	N/A	N/A	N/A	N/A

Survey Area: 5 | **Survey Unit:** 440501 | **Building:** 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Random/QC Total Surface Activity Data Sheet

Random Measurement Location	Pre Media Sample Data			Post Media Sample Data		
	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440501PRP-N001	8	12.6	N/A	N/A	N/A	N/A
440501PRP-N002	8	19.2	N/A	N/A	N/A	N/A
440501PRP-N003	9	2.6	N/A	N/A	N/A	N/A
440501PRP-N004	9	2.6	N/A	N/A	N/A	N/A
440501PRP-N005	8	22.0	N/A	N/A	N/A	N/A
440501PRP-N006	8	26.7	N/A	N/A	N/A	N/A
440501PRP-N007	1	-9.1	N/A	3	12.7	N/A
440501PRP-N008	1	22.5	N/A	N/A	N/A	N/A
440501PRP-N009	1	9.0	N/A	N/A	N/A	N/A
440501PRP-N010	1	23.9	N/A	N/A	N/A	N/A
440501QRP-N010	9	7.3	N/A	N/A	N/A	N/A
440501PRP-N011	9	20.7	N/A	N/A	N/A	N/A
440501PRP-N012	9	-0.1	N/A	N/A	N/A	N/A
440501PRP-N013	8	-2.9	N/A	N/A	N/A	N/A
440501PRP-N014	8	9.8	N/A	N/A	N/A	N/A
440501PRP-N015	1	-0.1	N/A	N/A	N/A	N/A
440501PRP-N016	1	11.7	N/A	3	6.8	N/A
440501PRP-N017	1	-0.1	N/A	3	24.9	N/A
440501PRP-N018	1	5.8	N/A	3	18.6	N/A
440501PRP-N019	9	2.6	N/A	N/A	N/A	N/A
440501PRP-N020	9	4.4	N/A	N/A	N/A	N/A
440501PRP-N021	8	7.9	N/A	N/A	N/A	N/A
440501PRP-N022	8	6.5	N/A	N/A	N/A	N/A
440501PRP-N023	1	2.6	N/A	N/A	N/A	N/A
440501PRP-N024	1	9.0	N/A	3	-5.4	N/A
440501PRP-N025	1	18.0	N/A	N/A	N/A	N/A
440501PRP-N026	1	11.7	N/A	N/A	N/A	N/A

Survey Area: 5 | **Survey Unit:** 440501 | **Building:** 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Biased Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
440501PBP-N033	10	0.0	N/A	N/A
440501PBP-N034	11	-0.6	N/A	N/A
440501PBP-N035	10	-1.5	N/A	N/A
440501PBP-N036	11	0.9	N/A	N/A
440501PBP-N037	10	1.5	N/A	N/A
440501PBP-N038	11	-0.6	N/A	N/A
440501PBP-N039	10	-1.5	N/A	N/A
440501PBP-N040	11	-0.6	N/A	N/A
440501PBP-N041	10	-1.5	N/A	N/A
440501PBP-N042	11	2.4	N/A	N/A
440501PBP-N043	10	-1.5	N/A	N/A
440501PBP-N044	11	-0.6	N/A	N/A
440501PBP-N045	10	-1.5	N/A	N/A
440501PBP-N046	11	0.9	N/A	N/A
440501PBP-N047	10	1.5	N/A	N/A
440501PBP-N048	11	0.9	N/A	N/A
440501PBP-N049	10	-1.5	N/A	N/A
440501PBP-N050	11	-0.6	N/A	N/A
440501PBP-N051	10	3.0	N/A	N/A

Survey Area: 5 | **Survey Unit:** 440501 | **Building:** 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440501PRP-N030	11	-0.6	N/A	N/A	N/A	N/A
440501PRP-N031	10	1.5	N/A	N/A	N/A	N/A
440501PRP-N032	11	-0.6	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440501	Building: 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Random Removable Surface Activity Data Sheet

	Pre Media Sample Data			Post Media Sample Data		
Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)
440501PRP-N001	10	0.0	N/A	N/A	N/A	N/A
440501PRP-N002	11	2.4	N/A	N/A	N/A	N/A
440501PRP-N003	10	0.0	N/A	N/A	N/A	N/A
440501PRP-N004	11	0.9	N/A	N/A	N/A	N/A
440501PRP-N005	10	-1.5	N/A	N/A	N/A	N/A
440501PRP-N006	11	3.9	N/A	N/A	N/A	N/A
440501PRP-N007	2	-1.2	N/A	N/A	N/A	N/A
440501PRP-N008	2	-1.2	N/A	2	-1.2	N/A
440501PRP-N009	2	-1.2	N/A	N/A	N/A	N/A
440501PRP-N010	2	0.3	N/A	N/A	N/A	N/A
440501PRP-N011	10	-1.5	N/A	N/A	N/A	N/A
440501PRP-N012	11	0.9	N/A	N/A	N/A	N/A
440501PRP-N013	10	-1.5	N/A	N/A	N/A	N/A
440501PRP-N014	11	-0.6	N/A	N/A	N/A	N/A
440501PRP-N015	2	1.8	N/A	N/A	N/A	N/A
440501PRP-N016	2	-1.2	N/A	2	-1.2	N/A
440501PRP-N017	2	0.3	N/A	2	-1.2	N/A
440501PRP-N018	2	0.3	N/A	2	-1.2	N/A
440501PRP-N019	10	1.5	N/A	N/A	N/A	N/A
440501PRP-N020	11	0.9	N/A	N/A	N/A	N/A
440501PRP-N021	10	0.0	N/A	N/A	N/A	N/A
440501PRP-N022	11	-0.6	N/A	N/A	N/A	N/A
440501PRP-N023	2	1.8	N/A	N/A	N/A	N/A
440501PRP-N024	2	-1.2	N/A	2	-1.2	N/A
440501PRP-N025	2	1.8	N/A	N/A	N/A	N/A
440501PRP-N026	2	-1.2	N/A	N/A	N/A	N/A
440501PRP-N027	10	1.5	N/A	N/A	N/A	N/A
440501PRP-N028	11	-0.6	N/A	N/A	N/A	N/A
440501PRP-N029	10	-1.5	N/A	N/A	N/A	N/A

Survey Area: 5	Survey Unit: 440501	Building: 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Comments Sheet

General Comments: N/A

TSA Comments: For instruments that were used for both TSAs and scans (T/S) on the Instrument Data Sheet, The TSA A-Priori MDA is 48.0 and the scan A-Priori MDA is 300.0.

RSA Comments: N/A

Media Comments: Media samples were collected from painted floor surfaces only. All other surfaces were either bare or the paint was factory original.

Survey Area: 5 | **Survey Unit:** 440501 | **Building:** 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)		Survey Type
							Alpha	Beta	Alpha	Beta	
1	511390	04/26/05	Electra	2352	DP-6	06/09/05	0.221	NA	48.0	NA	T/S
2	515538	04/26/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R
3	515538	04/26/05	Electra	2352	DP-6	06/09/05	0.221	NA	48.0	NA	T/S
4	515538	05/04/05	Electra	657	AP-6	06/13/05	0.184	NA	300.0	NA	S
5	511466	05/04/05	Electra	673	AP-6	07/24/05	0.173	NA	300.0	NA	S
6	515538	05/04/05	Electra	659	DP-8	08/28/05	0.167	NA	300.0	NA	S
7	515538	05/05/05	Electra	3370	DP-6	07/27/05	0.213	NA	48.0	NA	T/S
8	511466	05/05/05	Electra	3370	DP-6	07/27/05	0.213	NA	48.0	NA	T/S
9	513922	05/09/05	Electra	2352	DP-6	06/09/05	0.221	NA	48.0	NA	T/S
10	513922	05/09/05	SAC-4	1130	NA	07/03/05	0.330	NA	10.0	NA	R
11	513922	05/09/05	SAC-4	767	NA	08/03/05	0.330	NA	10.0	NA	R

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

Survey Area: 5 **Survey Unit:** 440501 **Building:** 440

Description: Building 440 Interior, Rooms 140A, 140B and 141, all surfaces

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Nbr Random Measurements Required: 29 Nbr Biased Measurements Required: 19 Nbr QC Required: 2

Nbr Random Measurements Performed: 32 Nbr Biased Measurements Performed: 19 Nbr QC Performed: 2

Alpha

Maximum:	31.4 dpm/100cm²
Minimum:	-9.1 dpm/100cm²
Mean:	10.9 dpm/100cm²
Standard Deviation:	9.2
QC Maximum:	11.8 dpm/100cm²
QC Minimum:	7.3 dpm/100cm²
QC Mean:	9.5 dpm/100cm²
Transuranic DCGL$_W$:	100.0 dpm/100cm²
Transuranic DCGL$_{EMC}$:	300.0 dpm/100cm²

Removable Surface Activity Measurements

Nbr Random Measurements Required: 29 Nbr Biased Measurements Required: 19

Nbr Random Measurements Performed: 32 Nbr Biased Measurements Performed: 19

Alpha

Maximum:	3.9 dpm/100cm²
Minimum:	-1.5 dpm/100cm²
Mean:	-0.1 dpm/100cm²
Standard Deviation:	1.4
Transuranic DCGL$_W$:	20.0 dpm/100cm²

Media Sample Results

Nbr Random Required: 5 Nbr Biased Required: 0

Nbr Random Collected: 5 Nbr Biased Collected: 0

Uranium

Maximum:	0 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	0 dpm/100cm²
Standard Deviation:	0
Uranium DCGL$_W$:	5,000 dpm/100cm²
Uranium DCGL$_{EMC}$:	15,000 dpm/100cm²

Transuranic

Maximum:	0 dpm/100cm²
Minimum:	0 dpm/100cm²
Mean:	0 dpm/100cm²
Standard Deviation:	0
Transuranic DCGL$_W$:	100 dpm/100cm²
Transuranic DCGL$_{EMC}$:	300 dpm/100cm²

Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.

Beryllium Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Result ($\mu g/100\ cm^2$)
Building 440Eastside - RIN 05C0243				
440-05022005-00-007	7	141	Top Of Electrical Box	< 0.1
440-05022005-00-008	8	141	Floor	< 0.1
440-05022005-00-010	10	141	Floor	< 0.1
440-05022005-00-019	19	141	Floor	< 0.1
440-05022005-00-021	21	141	Floor	< 0.1
440-05022005-00-029	29	141	Floor	< 0.1
440-05022005-00-035	35	141	Floor	< 0.1
440-05022005-00-038	38	141	Floor	< 0.1
440-05022005-00-049	49	141	Floor	< 0.1
440-05022005-00-051	51	141	Floor	< 0.1
440-05022005-00-055	55	141	Floor	< 0.1
440-05022005-00-065	65	141	Floor	< 0.1
440-05022005-00-067	67	141	Floor	< 0.1
440-05022005-00-073	73	141	Top Of Cabinet	< 0.1
440-05022005-00-074	74	141	Top Of Cabinet	< 0.1
440-05022005-00-086	86	141	Electrical Box	< 0.1
440-05022005-00-087	87	141	Electrical Box	< 0.1

Note: Eight-seven (87) beryllium samples were collected throughout Building 440. The above sample numbers are for the Eastside only. The Westside RLCR/PDSR will report the missing numbers in the numbering sequence.

Appendix 3
B440 Characterization Reports

Number	1613		
Date and Time	11/4/2004		
Primary Site Contact	Karen Lavorato	Primary Reg Contact	Harlan Ainscough
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440		CDPHE

Purpose

Discuss the partial removal of B440 Staging Area

Discussion

The Site's Part B RCRA Permit, has special provisions for Container Staging Areas within a container storage unit. Unit 440.1 has a designated Staging Area approved for the staging of loaded TRUPAC II containers destined for WIPP. Due to the construction of the railroad tracks, a corner portion of the staging area will be removed and replace with tracks. The staging area is inspected weekly and complete documentation indicates that no releases or spills have occurred in this entire area. An administrative review results in no further action for the asphalt. A new boundary line will be painted when the construction is complete. Harlan Ainscough concurred with the removal of asphalt.

Follow-Up

Number	1313		
Date and Time	5/14/1997		
Primary Site Contact	Mike Putney	Primary Reg Contact	Richard Fox.
Seconday Site Contact	Gary Konwinski	Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440, 664, 442		CDPHE APCD

Purpose

Richard Fox with CDPHE, APCD , Ed Kray with CDPHE, Gary Konwinski with RMRS and Mike Putney with Radian Air Quality Management, a subcontractor to K-H, toured Buildings 440, 664 and 442 on May 14, 1997. Air compliance tours of Site buildings and operations are part of the CDPHE surveillance Program for the Rocky Flats Environmental Technology Site and are conducted annually.

Discussion

Buildings 440 Attendance: The group met with Building 440 representative Mitch Thornton (RMRS). Verification: Mitch Thornton briefed the group on the status of future operations in Building 440. There is a possibility that the repack area will not be utilized in Building 440. A decision should be made by December of this year. Mitch Thornton conducted a general tour of the facility and explained planned uses for each room in the building. Results: No deficiencies were identified. Follow-up required (list any documents requested): None Building 664 Attendance: The group met with Building 664 representative David Losasso (RMRS). Verification: David Losasso conducted a quick walk-through of the facility. Mr. Fox asked if there was any change in chemical usage from the previous year. David Losasso said that spray paint is no longer used to mark the drums and touch-up the drums, that plastic labels are being utilized. Mr. Fox asked about the paint booth that was formerly in Building 664. David Losasso told him that the paint booth is in storage and will not be used in Building 664. Results: No deficiencies were identified. Follow-up required (list any documents requested): Building 442 Attendance: The group went to Building 442 to verify that filter testing is no longer being performed at the facility. Verification: Gary Konwinski told Mr. Fox that the filter testing formerly done in Building 442 is now being performed off-site. The building was not operational, and it appeared that equipment was being removed from the facility. Results: No deficiencies were identified. Follow-up required (list any documents requested): Mr. Fox asked for the date that the facility was closed down, and for chemical usage and number of filters tested in 1996. Gary Konwinski will provide the requested information.

Number	1032		
Date and Time	8/22/2003 3:00:00 PM		
Primary Site Contact	Karen Lavorato	Primary Reg Contact	James Hindman
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	750 Pad, B440		CDPHE

Purpose

Use of Treatment Unit S002

Discussion

Waste Operations (WO) is performing repack on the 750Pad (East and West Perma-cons) and B440 (Room 123A & B). As part of repack, WO will be removing or correcting non-conforming package configurations, such as the identification of free-liquids through Real-Time-Radiography. There are two categories of free liquids that need to be addressed during this operation; a) free liquid that has separated from the original waste matrix and b) containerized free liquid greater than1 liter. WO has requested the use of Treatment Unit S002, Oil and/or Aqueous Solidification Process to treat the waste so that the waste is acceptable offsite shipment. For liquids that have separated from its original matrix, sufficient amount of inert absorbent will be added to the container and manual mixing will be required to ensure the liquid is absorbed. The type and amount of absorbent will be based on the container's IDC and constituents codes listed in WEMS and the Waste/Residue Traveler. For containerized free liquids greater than 1 liter, a fingerprint of the liquid will be taken at a minimum. Additional sampling for example, VOAs, Semi-VOAs, metals, gram per liter, beryllium and PCBs may be necessary depending on where the liquid was generated and how much information WO knows about the non-conformance. (For example the inside container may be labeled identifying the contents.) Once the analytical data is received, an appropriate absorbent will be added. The type of absorbent will be decided on a case by case evaluation depending upon analytical results. Because active mixing will also be required to ensure all the liquid is absorbed, Unit S002 needs to be requested. In accordance with the Site Part B Permit, a seven-day notification is required to use Treatment Unit S002 for this activity. WO will modify the following procedures to define this process and include the safety controls necessary for active mixing of liquids with absorbents; PRO-1662, 750Pad Perma-con Operations, PRO-1691, 750Pad Perma-con East Repackaging Operations, and PRO-1358, Glovebox and C-Cell Waste Operations. James Hindman agreed that the notification can be in the form of this contact record.

Number	980		
Date and Time	7/2/2003 2:30:00 PM		
Primary Site Contact	D.A. Parsons	Primary Reg Contact	Dave Krucheck
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440		CDPHE

Purpose

Building 440 Anticipated Typing 2 Reconnaissance Level Characterization

Discussion

Meeting Attendance D. Parsons, RISS D. Kruchek, CDPHE C. Freiboth, RISS K. Shuler, RISS E. Bryson, RFFO S. Tower, RFFO H. Linsinbigler, RISS Discussion During the weekly RISS Area Status meeting held on Wednesday afternoon, 7/2/03, Duane Parsons (RISS) discussed the Building 440 Anticipated Typing 2 Reconnaissance Level Characterization (RLC). The historical and present use of the building was discussed, as was the various additions that have been added on to the building over time. It was discussed that the primary reason that the building was classified as an "anticipated" Type 2 RFCA facility was due to the drum repack room and the Permacon in Room 113. The remaining portions of the facility are not expected to contain residual radioactive or chemical contamination on facility surfaces. Based on the above information, it was agreed that a combination RLC and Pre-demolition Survey (PDS) would be performed after the drum repack equipment and the Permacon in Room 113 was stripped out, and the rest of the building was readied for PDS. It was also agreed that floor coatings would be evaluated for undercoating contamination in suspect areas during the Building 440 PDS.

Follow-Up

Number	977		
Date and Time	5/21/2003		
Primary Site Contact	Rob Garren	Primary Reg Contact	Archie Crouse
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440		CDPHE

Purpose

Arch Crouse with CDPHE, APCD and Rob Garren with URS Group Air Quality Management, a subcontractor to K-H ESS, met with Building 440 environmental and building representatives on May 21, 2003. Field inspections of buildings and operations are part of the CDPHE surveillance program for the Rocky Flats Environmental Technology Site and are conducted annually.

Discussion

Building 440 Attendance: The group met with Building 440 environmental representatives Don Brown and Karen Lavorato and building representative Jeanne Poling. Verification: Jeanne Poling briefed the group on current activities in the building and addressed building specific questions. Don Brown provided all information requested by the CDPHE representative. The CDPHE representative gathered information about waste shipment and repackaging activities occurring in the building. Results: No deficiencies were identified. Records Transmitted: HEPA filter testing data and waste shipment information.

Follow-Up

Air Quality Management personnel will coordinate with building representatives annual velocity flow profile testing.

Number	929		
Date and Time	4/14/1997		
Primary Site Contact	Mike Putney	Primary Reg Contact	Richard Fox
SecondaySite Contact	Gary Konwinski	Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440, 664, 442		CDPHE

Purpose

Richard Fox with CDPHE, APCD, Ed Kray with CDPHE, Gary Konwinski with RMRS, and Mike Putney with Air Quality Management/Radian Corporation toured Buildings, 440, 664 and 442, May 14, 1997. Air compliance tours of site buildings and operations are part of the CDPHE surveillance program for the Rocky Flats Environmental Technology Site and are conducted annually.

Discussion

Building 440: Attendance: The group met with Building 440 representative Mitch Thornton (RMRS). Verification: Mitch Thornton briefed the group on the status of future operations in Building 440. There is a possibility that the repack area will not be utilized in Building 440. A decision should be made by December of this year. Mitch Thornton conducted a general tour of the facility and explained planned uses for each room in the building. Results: No deficiencies were identified. Follow-up requested: None Building 664: Attendance: The group met with Building 664 representative David Losasso (RMRS). Verification: David Lasasso conducted a quick walk-through the facility. Mr. Fox asked if there was any change in chemical usage from the previous year. David Losasso said that spray paint is no longer used to mark the drums and touch-up the drums, that plastic labels are being utilized. Mr. Fox asked about the paint booth that was formerly in Building 664. David Lasasso told him the paint booth is in storage and will not be used in Building 664. Results: No deficiencies were identified. Follow-up requested: None Building 442: Attendance: The group went to Building 442 to verify that filter testing is no longer being performed at the facility. Verification: Gary Konwinski told Mr. Fox that the filter testing formerly done in Building 442 is now being performed off-site. The building was not operational, and it appeared that equipment was being removed from the facility. Results: No deficiencies were identified. Follow-up required: None

Number	679		
Date and Time	5/15/2002		
Primary Site Contact	Rob Garren, x2609	Primary Reg Contact	Archie Crouse
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440		CDPHE

Purpose

Arch Crouse with CDPHE, APCD, Jon Dion with DOE, RFFO and Rob Garren with URS Group Air Quality Management, a subcontractor to K-H ESS, toured Building 440 with environmental and building representatives on May 15, 2002. Field inspections of buildings and operations are part of the CDPHE surveillance program for the Rocky Flats Environmental Technology Site and are conducted annually.

Discussion

Building 440: Attendance: The group met with Material Stewardship environmental representatives Cathy Alstatt, Don Brown, and Valerie Thompson and Building 440 representative Kevin Stovall. Verification: Don Brown and Kevin Stovall briefed the group on current activities in the building and addressed building specific questions. The CDPHE representative inquired about the mission of the building and gathered process data for activities occurring in the building. The group toured the new annex, the permacon used for headspace gas sampling, and the drum repackaging facility. Results: No deficiencies were identified. Records Transmitted: HEPA filter DOP testing data, process data and the Building 440 chemical usage report. Follow-up required (list any documents requested): None

Number	422		
Date and Time	5/13/1998		
Primary Site Contact	Mike Putney	Primary Reg Contact	Dick Fox
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440, 664, 881	*2692	CDPHE

Purpose

Richard Fox with CDPHE, APCD, Veronica Orozco with RMRS Environmental, and Mike Putney with Radian Air Quality Management, a subcontractor to Kaiser-Hill, toured Buildings 440, 664, and 881 on May 13, 1998. Air quality compliance field inspections of buildings and operations are part of the CDPHE surveillance program 1or the Rocky Rats Environmental Technology Site and are conducted annually.

Discussion

Building 440 Attendance: The group met with RMRS building representative Rob Earley Verification: Rob Earley conducted a general tour of the building, and answered questions from the CDPHE representative. The Room 113 paintbooth has been stripped out and may be used for storage and sampling. The Room 123 paintbooth has just begun the demolition phase, and will be converted to a waste repackaging facility. Results: No deficiencies were identified. Records Transmitted; None Follow-up required (list any documents requested): None Building 440 Attendance: The group met with RMRS building representative Rob Earley Verification: Rob Earley conducted a general tour of the building, and answered questions from the CDPHE representative. . Results: No deficiencies were identified. Records Transmitted: None Follow-up required (list any documents requested): None Building 664 Attendance: The group met with RMRS building representatives Henrick Padron, Chuck Albin, and Dennis Mauser last year. Equipment from the building is being moved out. The paint can puncturing facility punctured about 2,500 cans last year. CDPHE representative recorded hour meter readings from the registered chillers and ensured that registration stickers and usage logs were in place. CDPHE representative recorded pressure drop readings from exhaust air HEPA filter stages. Results: No deficiencies were identified. Records Transmitted: 1997 Freon usage logs. Follow-up required (list any documents requested): None

Number	349		
Date and Time	6/14/2000		
Primary Site Contact	Mike Putney	Primary Reg Contact	Archie Crouse
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	440, 881	*2692	CDPHE

Purpose

Arch Crouse with the CDPHE, APCD, and Mike Putney with Radian Air Quality Management (AQM), a subcontractor to K-H ESS, inspected Buildings 440 and 881 with building representatives on June 13, 2000. Field inspections of buildings and operations are part of the CDPHE surveillance program for the Rocky Flats Environmental Technology Site and are conducted annually.

Discussion

Building 865, 883 and 886 Attendance: The group met with building representatives Cleve Tuck and Rob Early (RMRS), and environmental representative Cathy Alstaff (Energx). Verification: Rob Early and Cleve Tuck provided information regarding calendar year 1999 activities and current activities in the building and addressed building specific questions regarding current and future plans. The CDPHE inspector did not physically tour the building. Results: No deficiencies were identified. Records Transmitted: Building personnel transmitted drum repack records, chemical usage records, and HEPA filter pressure drop SOE round sheet. Follow-up required (list any documents requested): None
Building 881 Attendance: The group met with building environmental representatives Chuck Albin (RFCSS). Verification: Chuck Albin provided information regarding calendar year 1999 activities and current activities in the building and addressed building specific questions regarding current and future deactivation and decommissioning plans. The CDPHE inspector did not physically tour the building. Results: No deficiencies were identified. Records Transmitted: Chuck Albin transmitted aerosol can puncturing unit records to the CDPHE inspector. Mike Putney transmitted the most recent emergency generator hour meter monthly compliance record readings for the Building 881 emergency generators, and freon usage information for the building's registered chillers to the CDPHE inspector. Follow-up required (list any documents requested): None

Number	223		
Date and Time	10/26/2000 9:30:00 AM		
Primary Site Contact	Catherine Alstatt	Primary Reg Contact	Cindy Burbach
SecondarySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	B440	*3173	CDPHE

Purpose

Provide Information Relating to Drum Integrity Issues in Building 440

Discussion

I spoke with Ms. Burbach concerning a number of containers that have been identified in Building 440 that have integrity issues including corrosion and pinholes. I explained to her that one container was identified with corrosion and pinholes in the lid on Friday, last week and several additional drums have been identified with similar integrity issues this week, all with the same waste type, organic sludge, IDC 801 (~9-10 total to date). I informed her that the following actions have been taken to date: any container that has integrity issues will be overpacked; samples of the corrosion were taken yesterday (October 24, 2000) to be analyzed to provide information on the mechanism that is causing the corrosion; and an evaluation is being made about whether to move one of the containers to Building 776 where it could be opened and visually inspected. I explained to her that a full evaluation of the issue is currently being made. Once that evaluation is completed any necessary corrective actions will be developed and implemented. Ms. Burbach asked about the compatibility of the waste with the container. I informed her that this would be included in the evaluation. Ms. Burbach asked to be kept informed of the issue and any corrective actions that are developed.

Number	222		
Date and Time	10/4/2000 9:50:00 AM		
Primary Site Contact	Catherine Alstatt	Primary Reg Contact	Cindy Burbach
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	B440	*3173	CDPHE

Purpose

B440 Drum Filter Issues

Discussion

I contacted Cynthia Burbach today and informed her of four drums located in Building 440, three of which filter tested with low-flow and one with a high-flow. I explained to her that the building still has operations terminated and that a start up plan has been developed which details how these drums will be managed until the filters can be replaced.

Number	128		
Date and Time	8/14/2000 1:00:00 PM		
Primary Site Contact	Wayne Moe	Primary Reg Contact	James Hindman
SecondaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	B440	*4808	CDPHE

Purpose

Change in B440 HSGS Location and Update on B440 Safety Concern (Pallets)

Discussion

HSGS: Paragraph #3, Page III-72 of the RCRA permit states that Rm 113 (in B440) will be used for headspace gas sampling (HSGS) and analysis. I advised Mr. Hindman that the location of the B440 HSGS was no longer to be Rm 113 and, since Rm 113 was explicitly identified in the permit, requested permission to place the HSGS apparatus in a yet undetermined location in B440 (but within the permitted area). It was noted that HSGS is normally not a permitted activity and that the condition referencing HSGS would be deleted in the next Class 1 permit modification. Mr. Hindman agreed to the location change and that the permit should be "cleaned up" with the next permit modification. An approved HSGS procedure is still to be provided to the Division 30 days prior to initiation of operations (as currently required by the permit). B440 Safety Concern (Pallets) I advised Mr. Hindman that a Safety Alert had been issued on 8/10/00 concerning deformation of certain pallet types in stacks of B440 mixed waste drums. Contrary to an initial determination, the issue is not now considered an emergency situation and corrective measures were being developed that will result in appropriate restack the affected containers. Mr. Hindman acknowledged the situation and requested a copy of the Safety Alert - I delivered a copy to his desk

Appendix 2
Rocky Flats Environmental Technology Site
Contact Records

biased locations, and 5% of wall and ceiling surfaces of Class 2 Areas was performed. Alpha scan surveys were performed on 100% of the accessible Class 1 areas.

Radiological fixed transuranic alpha contamination was found on the floor of Room 123A up to 6,374.7 dpm/100cm2. Contamination in the filter plenum in Room 122 at levels up to 457 pCi/gm AM-241 was also found. There was no removable radiological contamination on the outside of the plenum or the Room 123A floor.

All other area within B440 Westside were less than the radiological PDSP unrestricted release limits. Exterior surveys confirmed that exterior surfaces of B440 do not contain radiological contamination above surface contamination guidelines provided in the PDSP. See Appendix 3 for Radiological Data Summary.

Eastside

One Class 2 radiological survey unit package was developed for B440 Eastside: 440501. A Class 2 designation was chosen since this area was not expected to contain any residual radioactivity greater than the transuranic DCGLw, even though the HSA and process knowledge showed that these areas of the building shipped and stored TRU and LLW materials during past operations.

Building 440 Eastside survey unit packages were developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure.* Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures.* Media samples were collected in accordance with RSP 16.03 *Radiological Samples of Building Media.* Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis.* Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control.*

A total of 53 TSA measurements, 51 RSA measurements, 5 surface media (paint) samples, and 5 pre and post TSA and RSA measurements were collected from painted floor surfaces. Wall and ceiling surfaces were factory-original paint, and were therefore not media sampled. The 5 floor samples were adequate to properly characterize the B440 Eastside. A minimum alpha scan survey of 50% of all floor surfaces (852 m2 minimum) at biased locations, and 5% of wall and ceiling surfaces (219 m2 minimum) of Class 2 Areas was performed.

VI. Demolition Survey Results

No airborne surveys were taken due to removal of contamination prior to demolition. This applies to radiological, as well as asbestos surveys.

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VII. Waste Stream Disposition

Waste Data	
Sanitary Disposal	
Disposal Site:	Foothills Hwy 93
Waste Volume (yd^3):	19200
Waste Weight (tons):	6369.85
Additional Information:	Included 300sqft of ACM floor tile
Hazardous Disposal	
Disposal Site:	Kettleman Hills Facility, Kettleman City, CA or Bethlehem Apparatus Co, Hellertown, PA
Waste Volume (yd^3):	Minor amounts
Waste Weight (tons):	Electronic circuit boards, thermostats, exit signs, batteries, fluorescent light bulbs and any other RCRA hazardous components were removed and taken to the RFCA temporary unit for combination with like waste streams for disposal.
Additional Information:	
Low-Level Waste Disposal	
Disposal Site:	Envirocare of Utah
Waste Volume (yd^3):	324
Waste Weight (tons)	26.34
Additional Information:	
Asbestos Waste Disposal	
Disposal Site:	BFI Tower Road
Waste Volume (yd^3):	30
Waste Weight (tons)	3.36
Additional Information:	

VIII. Deviations From the Decision Document

There were no deviations from the decision document.

IX. Description of Site Condition at End of Decommissioning

The B440 structure was removed to slab level. The building slab was removed, with all associated piping, drains and footers, with the exception of the section identified in Article 2, Appendix 1, which was left in place. The remaining slab will be greater than 3' deep upon completion of the Site final grade plan.

X. Demarcation of Excavation

This section is not applicable.

XI. Demarcation of Wastes Left in Place

See Section IX.

XII. Dates and Duration of Specific Activities

Activity	Responsible Contractor	Dates
Interior Strip-out	Kaiser Hill	5/2/05-5/23/05
Asbestos Abatement	Kaiser Hill	5/2/05-5/16/05
Demolition	Kaiser Hill	6/11/05-6/23/05
Demobilization	Kaiser Hill	6/23/05

XIII. Final Disposition of Wastes

See Section VII.

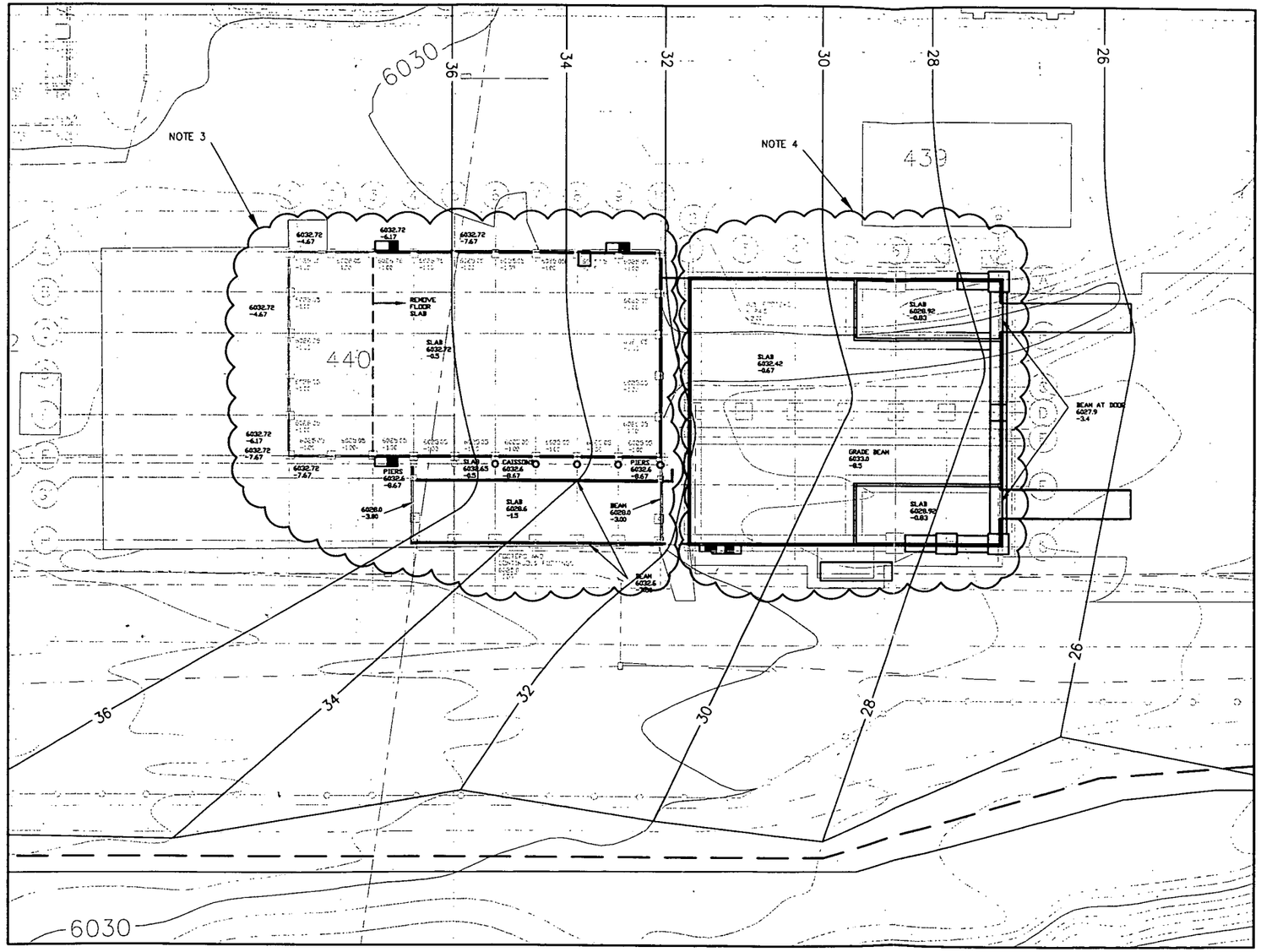
XIV. Next Step for Area

Area will be returned to final grade and revegetated consistent with the Site land configuration plan.

Appendix 1
Maps

Article 1 Utilities Disconnects

Article 2 B440 Foundation Removal



C501 C502 C503

DRAFT

0 15 30 60
ORIGINAL SCALE: 1"=30'
CONTOUR INTERVAL 2'
ROCKY FLATS COORDINATES

ITEM NO.	QUAN.	DESCRIPTION	MATERIAL

B440 FOUNDATION REMOVAL NOTES

1. SUBSURFACE FOUNDATION FEATURES AND DETAILS BASED ON QUERY AND REVIEW OF AVAILABLE AS-BUILT DRAWINGS FROM SITE DOCUMENT CONTROL. THESE FEATURES AND DETAILS HAVE NOT BEEN FIELD VERIFIED FOR ACCURACY OR COMPLETENESS.
2. PROPOSED FINAL GRADING BASED ON PROVIDING A MINIMUM COVER OF 3.5 FEET OVER BUILDING COMPONENTS THAT WILL REMAIN IN-PLACE.
3. THE FOLLOWING GUIDELINES ARE PROVIDED FOR PARTIAL REMOVAL OF B440 (ORIGINAL CONSTRUCTION) COMPONENTS.

COLUMN MARK	SUGGESTED REMOVAL
COLUMNS 3 TO 10	REMOVE FLOOR SLAB BETWEEN COLUMNS A AND F.
COLUMNS 4 TO 10	REMOVE FLOOR SLAB BETWEEN COLUMNS F AND G1.
COLUMN LINE A COLUMN LINE F COLUMN LINE G COLUMN LINE G1	REMOVE GRADE BEAM TO 0.5 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 3 AND 5. REMOVE GRADE BEAM TO 1.5 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 5 AND 6. REMOVE GRADE BEAM AND CAISSONS TO 2.5 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 6 AND 8. REMOVE GRADE BEAM AND CAISSONS TO 3.5 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 8 AND 9. REMOVE GRADE BEAM AND CAISSONS TO 4.5 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 9 AND 10.
COLUMN LINE 10	REMOVE GRADE BEAM TO 4.5 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS A AND F.
COLUMN LINE H	REMOVE GRADE BEAM TO 2.0 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 4 AND 6. REMOVE GRADE BEAM TO 3.0 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 6 AND 8. REMOVE GRADE BEAM TO 4.0 FEET BELOW FINISHED FLOOR SURFACE BETWEEN COLUMNS 8 AND 10.

4. THE FOLLOWING GUIDELINES ARE PROVIDED FOR PARTIAL REMOVAL OF B440 (EAST ADDITION) COMPONENTS:

COLUMN MARK	SUGGESTED REMOVAL
COLUMNS 1 TO 9	REMOVE ALL FLOOR SLABS BETWEEN COLUMNS A AND G. REMOVE CONCRETE SLABS EAST OF COLUMN 9
COLUMN LINE A COLUMN LINE B COLUMN LINE F COLUMN LINE G	REMOVE UPPER 6.5 FEET OF GRADE BEAM BETWEEN COLUMNS 1 AND 4. REMOVE GRADE BEAM TO TOP OF SPREAD/COLUMN FOOTERS BETWEEN COLUMNS 4 AND 9. REMOVE SPREAD FOOTER BETWEEN COLUMNS 7 AND 9.
COLUMN LINE G	REMOVE SPREAD FOOTER BETWEEN COLUMNS 6 AND 7. REMOVE COLUMN FOOTER AT COLUMN G-7.
COLUMN LINE 1	REMOVE UPPER 6.5 FEET OF GRADE BEAM BETWEEN COLUMNS A AND G.
COLUMN LINE 9	REMOVE GRADE BEAM AND SPREAD/COLUMN FOOTERS BETWEEN COLUMNS A AND G.

5. PLACE AND COMPACT SOIL TO FILL PITS, BASEMENTS, AND OTHER SUBSURFACE FEATURES. SOIL REQUIRED TO REFILL REMOVED FOUNDATION COMPONENTS IS ESTIMATED TO BE LESS THAN 500 CY.

LEGEND:

- 6000 — EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- PAVED ROAD
- UNPAVED ROAD
- FENCE
- EXISTING CULVERT
- 80 — PROPOSED LCDB INDEX GRADE
- PROPOSED LCDB INTERMEDIATE GRADE
- ×85 PROPOSED LCDB SPOT ELEVATION
- COLUMN CENTER LINE
- DRAINAGE DITCH/CREEK CENTER LINE
- FOUNDATION COMPONENT TO BE REMOVED (FULLY OR PARTIALLY)
- FOUNDATION COMPONENT TO REMAIN IN PLACE

ISSUE	DESCRIPTION	PROJECT/WCF NO.
A	ISSUED FOR REVIEW	KH900286-018

KEYWORDS
1.LAND
2.CONFIGURATION
3.GRADING
4.DRAINAGE
5.
BLDG./FACILITY 440
ROCKY/AREA N/A
GRID COORD./COL NO. N/A

TOLERANCES FRACT. ± ANGLE ± DEC. ± UNLESS NOTED OTHERWISE
REMOVE BURRS AND SHARP EDGES
NEXT ASSEMBLY N/A
SCALE: AS NOTED

DESIGN COMPANY: PARSONS
DESIGNED BY
R. STEGEN
DRAWN BY
R. SOLBERG
CHECKED BY
J. KAPINOS
INDEPENDENT VERIFIER
APPROVED BY
CLASSIFIER
ADDITIONAL APPROVALS

U.S. DEPARTMENT OF ENERGY
ROCKY FLATS OFFICE GOLDEN, COLORADO

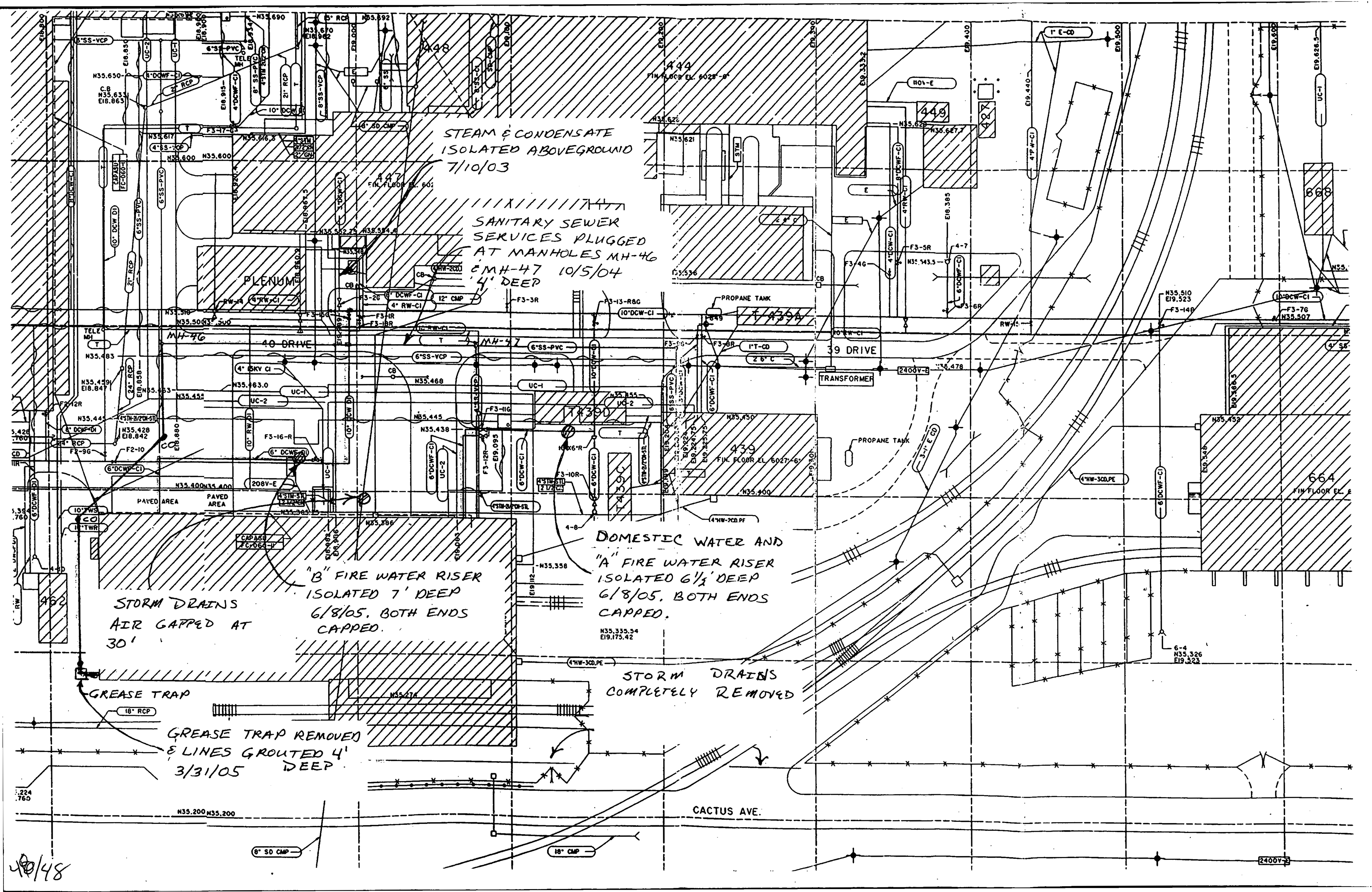
Rocky Flats Environmental Technology Site
GOLDEN, COLORADO

LAND CONFIGURATION DESIGN BASIS
IA GRADING AND DRAINAGE PLANS
BUILDING 440
GRADING AND FOUNDATION REMOVAL DETAILS

SIZE	DRAWING NUMBER	ISSUE
D	51754-C503	A

AUTOCAD COMPUTER GENERATED
NO MANUAL CHANGES ALLOWED

Plot date: Apr 05, 2005 - 7:46am


STEAM & CONDENSATE ISOLATED ABOVEGROUND 7/10/03
SANITARY SEWER SERVICES PLUGGED AT MANHOLES MH-46 & MH-47 10/5/04 '4' DEEP
MH-46
MH-47
40 DRIVE
39 DRIVE
PLENUM
444
FIN FLOOR EL 6025'-6"
447
448
449
427
668
664
439
FIN. FLOOR EL 6027'-6"
T 439A
T439D
462
TRANSFORMER
PROPANE TANK
PAVED AREA
CACTUS AVE.
"B" FIRE WATER RISER ISOLATED 7' DEEP 6/8/05. BOTH ENDS CAPPED.
DOMESTIC WATER AND "A" FIRE WATER RISER ISOLATED 6 1/2' DEEP 6/8/05. BOTH ENDS CAPPED.
STORM DRAINS AIR GAPPED AT 30'
GREASE TRAP
GREASE TRAP REMOVED & LINES GROUTED 4' DEEP 3/31/05
STORM DRAINS COMPLETELY REMOVED
48/48